EQUITY RESEARCH INITIATION

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Essential Utilities Inc

Water and Gas Do Mix After All; Initiating at Outperform

Our view: We fundamentally see Essential Utilities as trading at a discount to its 70% water/30% gas mix. While it has lost some of its ESG/ water valuation veneer when it acquired Peoples Gas, we believe the "punishment does not fit the crime". Peoples is a fast-growing gas utility; the water segment should grow through active consolidation. Our sum-of-the-parts suggests $49 of value, which justifies our Outperform rating.

Key points:

- **Essential Utilities is still primarily a water utility.** Essential Utilities (WTRG, formerly known as Aqua America) owns the second largest water utility in the country behind American Water Works. As such, it partakes in many of the broad themes that dominate the water sector: tremendous infrastructure upgrade needs, consolidation including municipal roll-ups, and, for the most part, supportive regulation. Seven out of the eight states in which WTRG's water segment, Aqua, operate have Fair Market Value legislation. Given this, we expect the company to continue to be active in water acquisitions, as exemplified by its $276.5 million pending acquisition of DELCORA, a wastewater municipal provider in Pennsylvania. Our model assumes ~$100 million of annual water acquisitions.
- **Peoples Gas is the right vehicle.** After a lot of fits and starts, WTRG finally closed mid-March its acquisition of Peoples Gas (PNG), a gas utility (LDC) with operations in Pennsylvania, West Virginia, and Kentucky. While investors can debate the wisdom for a water utility to buy a gas utility, we would be hard pressed to find a gas LDC that offers as many opportunities as Peoples does for WTRG. Both are anchored in PA, thus sharing common regulatory relationships, but PNG is in Western PA while Essential's Aqua America covers Eastern PA. This may open opportunities for WTRG to connect with water systems in the west that might have been hard to achieve otherwise. Furthermore, opportunities may exist in WV and KY for water consolidation, although Aqua is not in those states. Furthermore, Peoples Gas has multi-decade backlog of pipeline replacement that should assume strong growth for years to come.
- **Mix of business suggests $49 price target.** We believe that the best way to value the company is by assigning parent costs proportionally to Aqua and to Peoples then assign respective P/E multiples. Our base low-growth (secular) forward P/E multiples for water and gas are 24.9x and 19.3x, respectively. Given that both utilities are growing better than 4% and 3.5%, respectively, we assign a 25% premium for Aqua and 30% for People, to arrive at a blended 29.1x P/E multiple.

Outperform

NYSE: WTRG; USD 42.62

Price Target USD 49.00

Scenario Analysis*

Downside Scenario	Current Price	Price Target	Upside Scenario
36.00	42.62	49.00	58.00
↓ 13%		↑ 17%	↑ 38%

*Implied Total Returns

Key Statistics

Shares O/S (MM):	245.0	Market Cap (MM):	10,442
Dividend:	0.92	Yield:	2.2%
		Avg. Daily Volume:	1,411,456

RBC Estimates

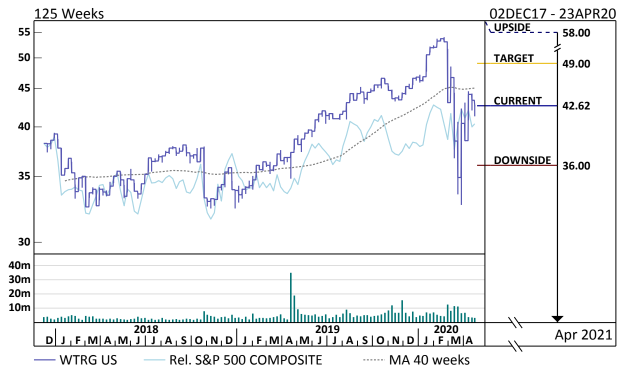
FY Dec	2019A	2020E	2021E	2022E
EPS, Adj Diluted	1.47	1.21	1.67	1.78
P/AEPS	29.0x	35.2x	25.5x	23.9x
DPS	0.91	0.97	1.04	1.11
Div Yield	2.1%	2.3%	2.4%	2.6%

All values in USD unless otherwise noted.

For Required Conflicts Disclosures, see Page 37.

Target/Upside/Downside Scenarios

Exhibit 1: Essential Utilities, Inc.



Source: Bloomberg and RBC Capital Markets estimates for Upside/Downside/Target

Price target/base case

We derive our $49 price target by taking our 2021 EPS of $1.67 and using a sum of parts to account for the water and gas operating segments. We apply a 25% premium to our base multiple of 24.9x P/E for water utilities and a 30% premium to our base multiple of 19.3x P/E for gas utilities, given both utilities' greater-than-average growth rates.

Upside scenario

Our upside value of $58 assumes that WTRG executes on greater-than-expected M&A and sees even stronger-than-projected base growth at Peoples. To our 2021E EPS of $1.67 we apply 50% premium to our base multiple of 24.9x P/E for water utilities and a 50% premium to our base multiple of 19.3x P/E for gas utilities.

Downside scenario

Our downside value of $36 assumes the company does not execute on as much M&A as we forecast and that its credit metrics weaken over time, causing the company to issue equity and potentially dilute its share price. To our 2021E EPS of $1.67 we apply -10% discount to our base multiple of 24.9x P/E for water utilities and use our base multiple of 19.3x P/E for gas utilities.

Investment summary

WTRG's acquisition of Peoples and expansion into the natural gas industry creates a strong platform for future growth. We expect to see a significant amount of organic growth at Peoples as well as growth through acquisitions at the water segments. We believe WTRG's water and gas presence in ten states sets it up nicely to expand its footprint. The growing presence of Fair Market Value legislation that allows IOUs to purchase municipal systems at fair value without incurring meaningful goodwill provides a strong backdrop that should encourage transactions. We are initiating coverage with a $49 price target and an Outperform rating.

Potential catalysts:

- Increased adoption of Fair Market Value legislation opens up greater opportunities for WTRG to transact.
- Greater geographic footprint proves advantageous from an M&A standpoint, increasing the amount of acquisitions.

Risks to call:

- Lower-than-anticipated adaptation of fair market value principles across the country could dampen expectations.
- M&A transactions could require greater equity than we forecast, or could result in a weaker balance sheet than we expect.
- Less favorable regulations or disruptions within public utility commissions could weigh on growth.
- Climate variability may cause increased volatility in weather and may impact water usage and related revenue, which may not be recoverable through rates.
- Continued lockdown from coronavirus could impact revenues, through higher bad debt expenses.
- ESG investing continues to gain traction, but WTRG does not meet certain ESG criteria due to Peoples, which makes it harder to benefit from these increased flows.

Key Questions

Our view

1. **Is it worth getting into the stock when it is trading at 27.0x NTM P/E?**

The answer depends on how much premium is attributed to ESG for a water-gas multi-utility. In our sum-of-the-parts analysis, we expect water/gas to contribute 70%/30% to 2021E EPS of $1.67. For water valuation, we look to the industry leader American Water Works (NYSE: AWK), which we have assumed a 35% premium above the water base P/E of 24.9x. While Aqua doesn't have the size of AWK, we believe rate base is supported by substantial capex opportunities. Nonetheless, the introduction of natural gas removes some of the ESG appeal. We apply a 25% premium to our water base P/E of 24.9x, resulting in a P/E multiple of 31.1x. Gas valuation is more straightforward. We apply a 30% premium to our gas base P/E of 19.3x, resulting in a P/E multiple of 25.1x, which we consider appropriate due to above-average rate base growth. The sum of the parts results in a blended P/E of 29.4x and total potential return of 17.0% inclusive of a 2.2% dividend yield. Our valuation suggests an attractive entry point.

2. **What does water-gas combo mean to Essential?**

While the addition of PNG doesn't alter the regulated utility model and should be earnings accretive, it challenges the way we think about valuation as noted above. On a standalone basis, it seems clear to us that PNG now deserves a premium to valuation from its higher-than-average rate base growth (the company expects to see an 8-10% CAGR between 2019 and 2022, vs. peer utility average of 6-7%) following a period of underinvestment. On a consolidated basis, while Aqua remains a solid business, we could contemplate a discount to the lofty valuation that a pure-play water utility typically enjoys, with the involvement of natural gas and a less stellar balance sheet. In some way, the lack of an appropriate comp for a water and gas combo suggest that we are in uncharted territory.

3. **How do balance sheet metrics fare post-PNG merger?**

Balance sheet looks less padded. We expect Essential to focus on deleveraging over the next few years. We see FFO-to-debt stabilizing in low-teens and debt-to-capital in the mid-fifties by 2023. Compared to water peers, these metrics seem may be on the lower end. However, thresholds for water utilities tend to be lower, with FFO-to-debt threshold at the 9-10% range. Currently, bonds at Essential and PNG are rated A/Baa2 and A/Baa1.

4. **Will Fair Market Value legislation continue to expand?**

The rise of fair market value is becoming the preferred alternative to the traditional depreciated original cost method, providing mutually beneficial outcomes to both the buyer and seller of municipal systems. Sellers are able to capture the true value of their assets while buyers are allowed to add the total purchase price to rate base, without padding goodwill, dubbing the premium an "acquisition adjustment".

5. **What are the unique characteristics of the water utility sector vs its electric and gas peers?**

The industry is 2x more capital intensive than the electric sector and 3x more than the gas sector. Despite this, water utilities generally spend the least amount of O&M dollars to maintain their assets. Over the past 20 years, water utility O&M expenses as a percent of PP&E averaged 20% compared to gas utilities of 40% and electric utilities of 60%. Further, the net PP&E to revenues ratio for investor-owned water utilities is about 5.0x, compared to electric utilities of 3.4x and natural gas utilities of 2.3x. In our view, this showcases the importance of infrastructure spending as a key characteristic of the industry's cost structure, making it difficult to reduce capital costs.

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Investment Summary

Essential Utilities Inc. (f.k.a. Aqua America, Inc.) is the second largest water and wastewater utility in the U.S., with a market capitalization of $10.6 billion. Before its entry into natural gas, Essential generated virtually all of its revenues through its regulated water utility segment (99.6% of sales) as of 2019, serving an estimated three million customers located primarily in states along the Rust Belt and Texas. On February 3, 2020, the company changed its corporate name to Essential Utilities Inc. following the acquisition of Peoples Natural Gas (PNG), and transformed into gas-water multi-utility with an expanded footprint. We expect water to remain the main contributor to earnings (70%) in 2020, though there are compelling growth opportunities across both segments. To a smaller extent, Essential also operates certain non-utility activities through Aqua Resources and Aqua Infrastructure.

Initiating coverage with $49 price target and Outperform rating. We view Essential as a solid water and gas multi-utility with substantial rate base investment opportunities in both segments. Post-merger with Peoples Natural Gas, Essential extends its operating territory to 10 states including the rust belt and Texas, with a combined rate base of $7.3 billion. The company remains deeply rooted in Pennsylvania, where 66% of combined customers are located. With the addition of PNG, Essential doubles its annual capex to ~$1 billion for 2020. From 2019 through 2022, the company expects to see to its water rate base grow at a 6-7% CAGR and its gas rate base to grow at an 8-10% CAGR. On a consolidated basis, we expect EPS to grow at a 6-7% CAGR during this time frame, an increase from a 4% CAGR between 2015 and 2019 as a pure-play water utility.

We view the regulatory environment in which Essential operates as constructive. More than half of Essential's annual capex is eligible for automatic recovery through surcharges. Further, at the water utilities, seven out of eight states have adopted the so-called Fair Market Value legislation (FMV). Under FMV, goodwill is added to rate base instead of being hung up on the balance sheet. This in turn encourages industry consolidations. Of course, not all deals are created equally. On average, we estimate $0.01 EPS accretion for every $50 million acquisition spend. Including DELCORA's $300 million acquisition (expected close early 2021), Essential has identified opportunities of various sizes that could add up to 320,000 customers, or ~10% of existing total. We also point to the eligibility of tax repair treatment which makes the PNG transaction particularly earnings accretive. Upon election with the IRS, the treatment allows previously capitalized repair costs to be expensed, resulting in higher deductions and lower tax expense without jeopardizing customer bills. An additional look-back deduction would also eligible, but requires some form of approval from the Pennsylvania PUC. We think the ability to stay away from rate cases, as in the case of Aqua Pennsylvania is especially valuable.

In our view, water and gas is a winning combo. Water remains Essential's core business and enjoys the benefits of an ESG play. Gas, via PNG, provides fast, complementary growth which differentiates Essential from water peers. While 2020 could be an "off-year" with a partial contribution from PNG and management focused on deleveraging, we see Essential getting back on track in 2021. The market has penalized the stock for introducing natural gas in the picture. We believe the "punishment does not fit the crime" and are bullish on the stock. We also recognize that the ESG investing movement has hit a temporary pause. As markets find some degree of normalcy – not necessarily recovery – we expect the movement to regain steam. We see Essential as one of the main beneficiaries of that trend despite its gas business.

Investment Highlights

Municipal acquisitions drive accretion

Fragmented industry ripe for municipal acquisitions. The U.S. water and wastewater industry is heavily commoditized. The fragmented nature of the water industry is highlighted by the roughly 50,000 water systems in the U.S. and about 15,000 community wastewater systems compared to 1,400 gas systems and 3,800 electric systems. Roughly 84% and 98% of the U.S. population is served by municipal water systems and wastewater systems, respectively, according the Environmental Protection Agency (EPA). This underscores the thirst for industry consolidation, in our view. Notably, investor-owned utilities only serve about 16% of the total population.

Exhibit 2: U.S. water among the most fragmented utility sectors

Natural Gas Utilities | Electric Utilities | Water Utilities

Source: Enviornmental Protection Agency and Energy Information Administration

Fair Market Value legislation has encouraged deal-making. Municipal acquisitions have become a popular theme over the last several years driven by a more favorable regulatory backdrop. The rise of FMV assessment of water and wastewater systems is becoming the preferred alternative to the traditional depreciated original cost method, providing mutually beneficial outcomes to both the buyer and seller of municipal systems. Sellers are able to capture the true value of their assets while buyers are allowed to add the total purchase price to rate base, without padding goodwill, dubbing the premium an "acquisition adjustment". Currently, 12 states have implemented the measure. We estimate every $50 million (in line with historical average) that Essential deploys towards municipal acquisitions adds a run rate $0.01 to EPS. Kentucky is the only state under Essential's operating jurisdiction that has not enacted FMV legislation.

Infrastructure surcharges permit rate adjustments outside of rate cases

Regulatory mechanisms that permit investor-owned utilities to adjust rates outside of general rate cases are referred to as infrastructure surcharges. These surcharges generally permit recovery of capital investments multiple times a year, and creates significant flexibility between rate cases. While the main benefit is to reduce regulatory lag, surcharges also allows utilities to stay away from a full rate case which subjects their rate base ROE and equity ratio to review by state commissions. In some way, utilities are able to preserve outperformance by avoiding rate cases. Surcharges come in many forms and are specific to states. For Essential, the main surcharges are the Distribution System Improvement Charge (DSIC), the Water and Sewer System Improvement Charge (WSSIC), and the Qualifying Infrastructure Plant Surcharge (QIPS). Post-PNG transaction, the Pipeline Replacement Program (PRP) also became available. The chart below illustrates the various mechanisms by state and their respective allowed surcharge.

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Exhibit 3: Various surcharges employed by Essential, by state

AQUA

State	PA	IN	OH	NJ	IL	NC
Mechanism	DSIC	DSIC	SIC	DSIC	QIPS	WSSIC
Allowed Surcharge	7.5% W 5% WW	10%	12.75% W 9% WW	5%	2.5% average annual increase	5%

PEOPLES

State	PA	KY
Mechanism	DSIC	PRP
Allowed Surcharge	5%	No cap

Source: Company Presentation

Management estimates 52% of total capex between 2020 and 2022 are surcharge-eligible, while the remaining 4% must go through standard rate making. By segment, 46%/58.7% are surcharge-eligible for water/gas. We view these statistics a key component of Essential's robust capital program and long-term EPS growth.

Outsized rate base expansion; PNG as a new platform for growth

The Peoples acquisition creates a strong growth opportunity. Under its previous ownership, Peoples was severely underinvested in and now requires significant upgrades to its infrastructure. The system requires nearly 3,000 miles of gas pipeline replacement. With its accelerated pipe replacement program, the company expects rate base to grow organically at an 8-10% CAGR over the next three years. The election of repair tax at Peoples further increases earnings potential, which we discuss in more detail further down.

The acquisition of PNG represents new but complementary territory to the core water business. Peoples serves territories in Pennsylvania, Kentucky, and West Virginia. Aqua Pennsylvania's footprint is in the eastern side of PA while Peoples, headquartered in Pittsburgh, serves territories on the western side of PA. We believe the company's entrance into the gas industry will help grow its water business as well. Essential will likely be able to take advantage of its increased presence in the Pittsburgh area and entry into new states, and will find a way to aggregate more water assets.

Financial Outlook

Earnings outlook

The company forecasts rate base at its water utilities to grow at a 6-7% CAGR from 2019 through 2022 excluding rate base growth from acquisitions. Its capex is driven by investment in pipeline replacement, water treatment, and metering and IT development. Peoples Gas rate base is expected to grow at an 8-10% CAGR 2019 through 2022, as its aging distribution infrastructure requires significant pipeline replacement. Our 2020 through 2023 earnings per share estimates are $1.21, $1.67, $1.78, and $1.89. Our estimate of $1.21 reflects a partial year of earnings from Peoples as well as the effects of share dilution from 2019 financing. The $0.46 cent EPS increase in 2021 reflects a full year of earnings from Peoples, compared to three quarters in 2020. We expect earnings to increase at a +6.5% CAGR through 2023 based off 2019 adjusted EPS of $1.47. Breaking down the estimates by segment, water contributes ~64% of earnings and gas contributes ~36%. Our estimates reflect investment and continued acquisitions at its water utility and growth through investment at its gas segment. Our +6.5% EPS outlook compares to Essential's historical 4.0% EPS CAGR (2015-2019).

Dividend growth outlook

Essential has increased its common stock dividend at a 7.2% CAGR over the past four years. Our 2020 through 2023 dividend per share estimates are $0.97, $1.038, $1.110, and $1.188 and imply a DPS CAGR of 7%. The historical and forecasted payout remains in the 60%-65% range, excluding the 2020 estimate which is significantly higher due to a partial year of earnings from Peoples Gas.

Exhibit 4: Historical and projected dividend including forecasted EPS

	2018	2019	2020E	2021E	2022E	2023E
Dividend Per Share	$0.847	$0.907	$0.970	$1.038	$1.110	$1.188
Dividend Growth	*7.0%*	*7.0%*	*7.0%*	*7.0%*	*7.0%*	*7.0%*
Adjusted EPS	**$1.07**	**$1.47**	**$1.21**	**$1.67**	**$1.78**	**$1.89**
Dividend Payout Ratio	*79.1%*	*61.7%*	*80.1%*	*62.2%*	*62.5%*	*62.8%*

Source: Company data, RBC Capital Markets estimates

Sources of funds

We expect Essential to fund its capital expenditures through mostly new debt issuances and retained earnings. Regarding water M&A transactions, we expect the company to finance these transactions through a mixture of debt and equity. In 2020 we model ~$330 million equity in the second half of the year to finance its acquisitions including DELCORA, which is expected to be completed in late 2020 or early 2021. In the following years, we model a base of $50 million of equity, in some years issuing larger block amounts of equity to ensure its credit grade ratings. Historically, capex has been the largest use of cash followed by the dividend payout. Water acquisitions only accounted for ~7% of total capital deployment, but we expect this allocation to increase in future years. We do not model out any M&A transactions at Peoples, as we believe management is being careful about maintaining an earnings mix that is more heavily weighted from water operations.

Exhibit 5: Sources and uses of funds

	2018	2019	2020E	2021E	2022E	2023E
Free Cash Flow						
Cash Flow from Operations	369	339	576	769	822	878
Common Stock Dividend	(151)	(189)	(249)	(273)	(293)	(315)
Retained Free Cash Flow	**218**	**150**	**327**	**496**	**529**	**563**
Acquisitions	(146)	(60)	(3,515)	(327)	(100)	(100)
Capital Expenditures	(496)	(550)	(810)	(960)	(969)	(979)
Net Free Cash Flow	**(424)**	**(460)**	**(3,998)**	**(790)**	**(540)**	**(516)**
Sources of Funds						
Net Long Term Debt Issuances	1,332	1,409	1,100	950	1,100	650
Net Short Term Debt Issuances	12	10	-	(10)	40	-
Common Equity Issuances	5	1,272	1,050	50	50	50
Net Debt and Equity Issuances	**1,349**	**2,692**	**2,150**	**990**	**1,190**	**700**
Ending Cash Balance	4	1,869	18	13	12	18

Source: Company data, RBC Capital Markets estimates

Credit metrics

Essential is rated A by S&P and Baa2 by Moody's. At the subsidiary level, Aqua is rated A+ and Peoples is rated A. Prior to the acquisition, the company's debt to cap ratio was maintained between 50% and 55%. In future years, we expect this ratio to trend higher and sit around the mid-fifties. Following 2020, we expect FFO-to-debt to be in the low teens, sitting around 13.4% in 2021. We see this move down to ~12% in the following years, which could point to a need to issue a larger amount of equity in 2023. This compares to its four-year historical average of around 20%.

While these metrics seem weak from a gas and electric utility perspective, water utilities may maintain their investment grade rating while having significantly higher debt to cap ratios and lower FFO-to-debt. A water utility may maintain an investment grade rating with a debt to cap as much as 60% and a FFO-to-debt as low as 9%. We expect Essential to remain comfortably far away from hitting these thresholds, and will continue to issue equity to maintain its solid credit metrics as it pursues additional acquisitions.

Exhibit 6: WTRG credit metrics

	2018	2019	2020E	2021E	2022E	2023E
Total Debt to Cap	55.7%	53.2%	51.9%	53.7%	54.5%	55.0%
EBIT Interest Coverage	3.3x	3.4x	2.6x	2.9x	2.9x	2.9x
FFO Interest Coverage	3.9x	3.4x	2.9x	3.2x	3.2x	3.2x
FFO to Net Debt	16.1%	7.1%	10.3%	13.4%	12.1%	11.9%
Discretionary Cash Flow to Debt	-10.9%	-7.7%	-7.8%	-6.7%	-6.0%	-5.3%

Source: Company data, RBC Capital Markets estimates

Repair tax is back on the table

Repair tax drove outsized EPS growth between 2013 and 2016 mostly for Aqua Pennsylvania. Essential now plans on electing repair tax for PNG in Pennsylvania. The mechanism has the benefits of keeping customer rates stable while increasing investments (and returns) without having the need to file for a lengthy rate case. For this reason, Essential has been able to stay out of a rate case on the water side since 2012, coupled with the implementation of distribution surcharge mechanisms, which we had touched on in this report. In a nutshell, the repair tax allows certain maintenance costs previously capitalized to be expensed, effectively increasing deductions on a *tax basis* and improving cash flows. The Pennsylvania PUC then allows flow through tax accounting treatment that lets tax savings flow through to the income statement resulting in a lower effective tax rate and elevated earnings. Essential collects from customers at the statutory tax rate per the existing revenue requirement, but is expected to pay less to the tax authority. The impact is akin to a tax deferral as the benefit is the Thought in a different way, Essential collects the cost of taxes as new investments will bear the cost of higher taxes via the rate.

The amount of deduction is divided into two parts, ongoing deductions and a catch-up deduction for those costs that incurred in the past. Ongoing deductions are straightforward with Essential filing the election with the IRS. Management currently expects 8 to 12 cents of earnings accretion on a run-rate basis. The terms of the catch-up deduction would require approvals from the Pennsylvania state commission. As a reference point, the previous case with Aqua Pennsylvania allowed the deduction to be amortized over 10 years.

Balance Sheet and Expected Capital Deployment

Strong credit metrics to begin with. PNG brings metrics back to industry average. Essential's debt is rated A by S&P and Baa2 by Moody's, which is in line with the water industry. However, credit metrics look superior relative to peers excluding PNG, with debt-to-cap tracking low 50s and FFO-to-debt between high teens and low 20s in the past five years. To put these figures into perspective, AWK, a close peer to Essential before the PNG transaction, features a debt-to-capital ratio just below 60% and FFO-to-debt of mid to high teens during the same period.

Post-PNG transaction, we believe Essential's credit metrics could track closer to levels at AWK. We expect FFO-to-debt to stabilize in lower mid-teens and debt-to-capital at mid-50s, in line with company guidance of 12-14% and 50-55%, respectively. We believe towards 2023 the metrics will track farther away from the company's comfort levels, which may incentivize an equity issuance around that time. It is important to note that while credit agencies have typically considered 11-12% FFO-to-debt as the threshold for investment grade (BBB/Baa2) ratings for gas utilities, their threshold for water utilities is typically even lower in the 9-10% range. Due to the regulated nature of utilities, companies are able to flex their balance sheet to levels that would generally perceived as alarming in other industries. We also give consideration to the fact that PNG's debt (A/Baa1) is rated similarly to Essential (A/Baa2) and do not anticipate any material deterioration after the acquisition. The following summary shows credit ratings among Essential, Aqua America and PNG.

Exhibit 7: Current credit ratings for Essential, Aqua American and PNG

	S&P Global Ratings		Moody's	
	Issuer	Issuance	Issuer	Issuance
Essential	A	A-	Baa2	Baa2
AQUA (PA Subsidiary)	A	A+	--	--
Peoples	A	A	Baa1	Baa1

Source: Company Presentation

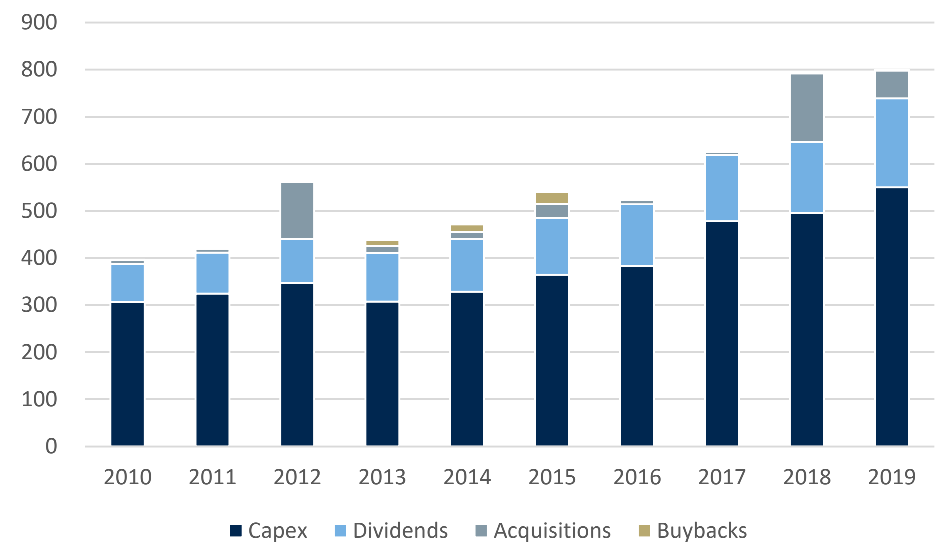
Capital deployment

Tapering expectations on dividends. Essential announced an annualized $0.94/share dividend payment in 2019. Between 2014 and 2019, dividends had achieved 7.3% CAGR along with healthy growth in earnings per share. In our outlook, we estimate dividend to grow in the 6-7% range in near term coupled with acquisitions that are in the $100 million range. Eventually, growth should taper off and fall in line with EPS growth, which we anticipate to be in the 6.0-6.5% range. We believe this enables Essential to manage a payout in the low 60s, in line with company guidance of 60-65% dividend payout. While the range is still a step up from water utility peers, which typically have payout ratios 50-60%, and is more in line with gas utility peers, we believe our estimate represents stabilizing ground after the PNG transaction.

Minimal share buybacks. Since 2010, buybacks averaged ~1% of total capital deployment. An abundance of capital projects in the water industry have stymied the need for buybacks to return capital to shareholders. Given our view of further consolidation in the industry and massive infrastructure upgrade opportunities in water pipes, we don't see buyback activity in the cards anytime soon.

Acquisitions remains a relatively small component; focus turns to organic growth following PNG transaction. Acquisitions have generally not been a large piece of capital deployment. Since 2010, acquisitions totaled 7.5% of overall capital deployment. We believe M&A could be somewhat limited now given the need to deleverage and preserve the strength of the balance sheet as Essential embarks into the gas distribution business. Management sees roughly $100 million of acquisitions per year but could inch higher if a larger deal were to close. The water industry is ripe for consolidation, in our view. We like the roll-up of municipal deals despite accretion being relatively modest. Assuming $100 million of deals, a blended 50% equity ratio and 10% ROE yields 3 cents of accretion on an increasing base, or +2% on current 2020E consensus.

Exhibit 8: Capital deployment, 2010-2019

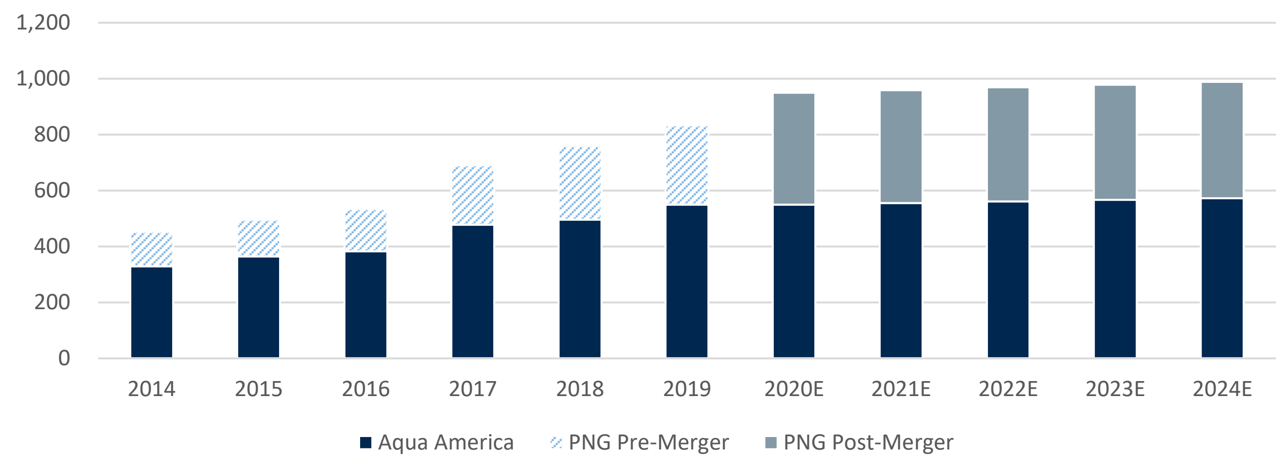


Source: Company 10K

Capital expenditures ramp up in 2020, post-PNG transaction. Core business has a healthy runway, expected to invest $1 billion infrastructure annually with a solid, organic rate base growth of 6-7% for water and 8-10% for gas. Further, more than half (52%) is recoverable through surcharges and the rest through rate cases. We view opportunities for infrastructure upgrade for both gas and water favorably. To put this into perspective, PNG plans to renew about 189 miles of pipeline per year under the long-term infrastructure investment program (LTIIP). Based on current capex expectations for 2020 of $400 million, this implies $2 million per mile of pipe. Management has indicated that there are nearly 3,000 miles of gas main suitable for replacement in Pennsylvania alone. In water and wastewater, the EPA estimates $471 billion and $271 billion worth of infrastructure investments needed as of today, respectively. We acknowledge that all pipes are not created equal and warrant different levels of investment based on deterioration. The opportunities are strongly outlined, however. We remain positive on the regulatory environment for both water and gas.

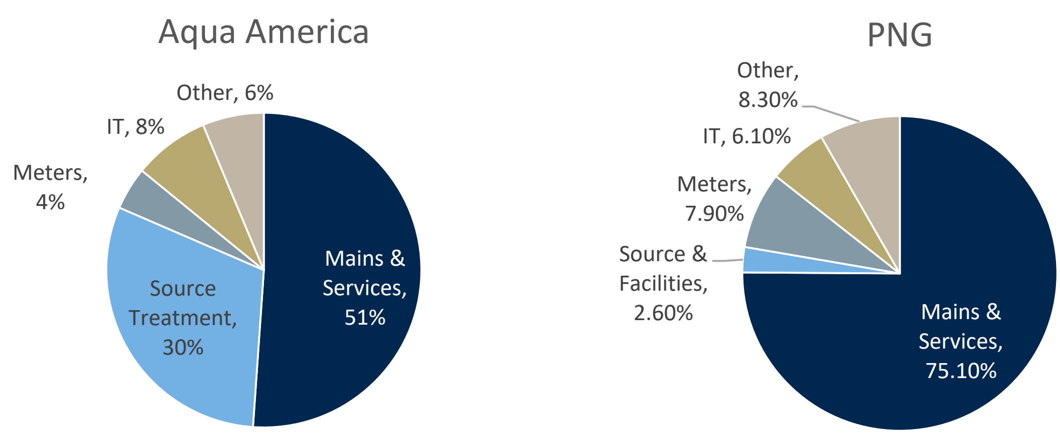
A counterweight to our capex expectations is the temptation to overgrow the gas utility. While gas investments typically generates a better return (8-10% ROE range, vs. 5-6% for water), we believe management could limit the growth in gas giving consideration to valuation of the overall utility. Earnings accretion from gas investments could erode the premium valuation that Essential enjoys from Aqua America. This is especially relevant to some investors who are concerned with ESG considerations. For 2020, we expect the gas/water capex mix to be 42%/58%. Going forward, we believe the ratio could remain static over even tilt towards water.

Exhibit 9: 2020 capex ramps up to $1 billion, slated to invest $2.8 billion, 2020E-2022E



Source: Company Presentation, RBC Capital Markets estimates

Exhibit 10: Infrastructure investments, 2020E-2022E



Source: Company Presentation

Financing

The company plans to finance its acquisitions with a mixture of debt and equity. The company has indicated that an equity issuance of ~$300 million will likely come in late 2020 as the company finances the DELCORA and other acquisitions. In 2020 and 2021 we will see the dilutive effects issuances used to fund the PNG and DELCORA transactions. Looking forward, we model $100 million in acquisitions every year, $50 million of which would be funded through equity.

Upcoming notable acquisitions

DELCORA acquisition should provide upside. In September 2019, Essential (then Aqua America) announced the acquisition of DELCORA wastewater assets for $276.5 million. The acquisition represents the largest municipal acquisition in the company's history. DELCORA is a wastewater authority that treats water for smaller municipal systems that have their own distribution systems. DELCORA has around 15,000 customers, but the end-use customers of those municipalities total around 200,000. This generates a significant amount of follow-on opportunities to acquire the distribution wastewater systems that DELCORA serves. As with other municipal acquisitions, the company expects to see an earnings lag. Rates at municipal water and wastewater systems are significantly lower than those of investor-owned utilities. Municipalities may not be earning a return, paying taxes, or have other financial commitments, which lowers costs to the end-use customers. The company expects DELCORA to go into the Pennsylvania rate case that will most likely be filed in 2021. With new rates effective thereafter, the company expects full earnings from DELCORA in 2022.

Regulatory jurisdiction

Most of Essential's water, wastewater and now gas utility operations are subject to regulation from state commissions. As these commissions regulate billing rates and terms of services, and approval of rate cases and surcharges, they exert power over the profitability of Essential. Individual policies vary across commissions, and depend on the policies of the state. Essential has historically maintained constructive relationships with them, especially in the home ground Pennsylvania. The following is list of utility commissions within Essential's operating jurisdictions.

Exhibit 11: State utility commissions

State	Utility Commission
Pennsylvania	Pennsylvania Public Utility Commission
Ohio	Public Utilities Commission of Ohio
Texas	Public Utility Commission of Texas
Illinois	Illinois Commerce Commission
North Carolina	North Carolina Utilities Commission
New Jersey	New Jersey Board of Public Utilities
Inidiana	Indiana Utility Regulatory Commission
Virginia	Virginia State Corporation Commission
West Virginia	Public Service Commission of West Virginia
Kentucky	Kentucky Public Service Commisssion

Source: Company 10K

Risks to Rating and Price Target

Less favorable regulatory backdrop. Lower-than-anticipated adaptation of FMV principles across the country could dampen expectations and weigh on growth in the long run. Changes in or less favorable regulations or disruptions within public utility commissions could also weigh on growth.

Integration of PNG takes longer than expected. In that case, we could see higher O&M expenses in 2020 and possibly spilling into 2021. This could hinder Essential's progress to deleverage the company, on a FFO-to-debt basis. However, we view Essential to have a strong leadership with a highly experienced management team which has managed consolidations frequently in the past and believe the integration should proceed as planned.

Poor leverage metrics leads to credit downgrade. As we had noted earlier in the report, we see leverage metrics deteriorating dramatically in 2020. Despite stabilizing in 2021, these metrics cut close to rating thresholds for water utilities. Plus, we are aware of credit rating agencies' sector-wide downgrade, putting even more pressure on companies like Essential. Debt at Essential and PNG are one to two notches away above non-IG rating. Should leverage metrics deteriorate more than expected, we see a credit downgrade weighing down the stock.

Natural gas segment decreases appeal from an ESG perspective. We believe Essential's attractiveness from an ESG standpoint has lessened now that it has entered the natural gas sector. As ESG investing becomes more main stream, we expect to see greater flows into the water sector from specialized funds and awareness of ESG metrics. Water utilities, which have historically traded at a premium to electric and gas utilities, will likely see even higher premiums due to increased investor appetite. We believe that scarcity will partially mitigate the negative impact of its gas segment. There are under ten pure-play water utilities, and Essential had the second-largest water footprint when its operations were only in the water sector. We believe Essential still maintains ESG appeal, but will not benefit as much from the ESG interest as its pure-play water counterparts.

Decrease in water supply and material changes in water usage patterns. Climate variability may cause increased volatility in weather and may impact water usage and related revenue, which may not be recoverable through rates. Increased frequency of rainfall during the warmer months could also weigh on water usage and lead to lower revenues.

Decarbonisation hinders growth opportunities at the gas utility. The transition to electrification may be a risk to growth at Peoples as cities and states take stronger stances on GHG targets and continue to promote decarbonisation and electrification. Legislation and initiatives have encouraged the use of electric appliances and heating systems over traditional gas-based systems. One city in California even banned new gas connections in commercial and residential buildings. The gas distribution system is primarily decoupled, which separates volumes from earnings. This protects Peoples here from a volumes per customer standpoint, but the risk of decarbonisation comes from less connection growth. This discouragement of gas consumption could prevent the company from adding connections and potentially cause it to lose revenues if a customer were to switch entirely to an electric system. The company benefits from a customer count perspective since it charges fixed infrastructure costs, regardless of how much the ratepayer consumes. We believe states in which Peoples operates – PA, WV, and KY – are less likely to discourage the use of natural gas in the near future. However, emissions initiatives down the road could put downward pressure on the stock.

Delays in closing DELCORA. The company expects the DELCORA acquisition to close in late 2020 or early 2021. A delay in the DELCORA acquisition related to COVID-19 or for other reasons could negatively impact earnings in 2022 and onwards. If the acquisition is not completed before the company goes into its Pennsylvania rate case in 2021, they may risk not being able to file for new rates at DELCORA. The company expects full earnings contributions from DELCORA in 2022, after new rates are implemented. If DELCORA does not make it into the rate case, the company will continue under-earn on the asset until the next rate case since rates for municipal systems are considerably lower than those of investor-owned utilities.

Extension of coronavirus lockdown could further hurt the economy and increase bad debt expenses. Utilities in general have means to recover incurred costs, though they may need to finance these costs while waiting for the commissions to determine the proper recovery mechanism, if permitted. As more customers face hardship, it would put pressure on their ability to pay their bills, including the utility bills. This, in turn, would translate into a revenue shortfall that could create a cash shortfall. We anticipate that commissions will allow these costs to be treated as a regulatory asset to be recovered over time.

Valuation

Outperform, $49 PT

Valuation framework supports high base multiple. To derive our valuation for water, we turn to the dividend discount model (DDM), which we use to calculate the sustainable value of a low-growth utility. We use the parameters that we use for gas utilities for market return (9.75%), beta (0.55), risk-free rate (3.5%), and dividend payout ratio (64%). We have changed our growth assumption to 4% for water from 3.5% for natural gas and we add a 10% ESG/water premium. This results in a base P/E for a low growing water utility at 24.9x forward P/E.

We arrive at our $49 price target using a sum-of-parts method. We apply a 25% premium to our base multiple of 24.9x P/E for water utilities and a 30% premium to our base multiple of 19.3x P/E for gas utilities. We believe both business warrant premiums due to strong growth prospects and footprints in states with constructive regulatory environments. Our price target of $49 implies a total return of ~17% and justifies our Outperform rating.

Valuation considerations

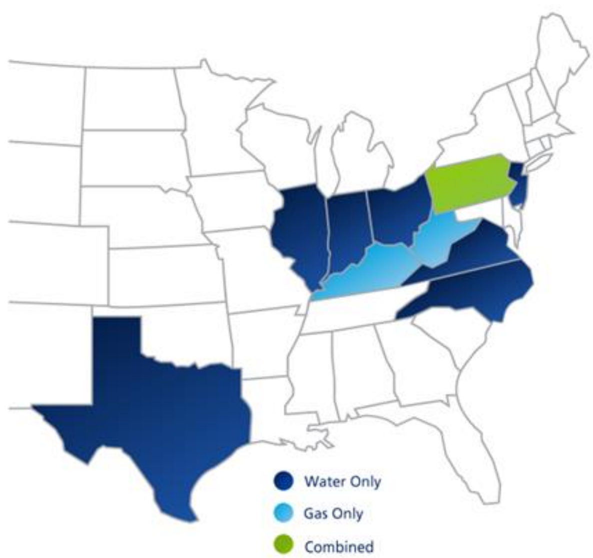
WTRG is currently trading at a 4-turn discount to water peers on 2021E EPS, despite having the second-largest water footprint. This is likely due to the loss of the benefit from the water premium that bolsters its pure-play peers as a result of Essential's plunge into natural gas. We believe the company has a solid earnings mix of 70%-30% water and a premium should still be warranted due to water segments; Essential operates the second largest water business and maintains around 25% of market cap.

We also believe that Peoples creates a strong platform for growth at both the gas and water segments. The multi-decade backlog of pipeline replacement requires significant and accelerated investment that will generate low risk organic rate base growth. Turning to the water segment, we think the water business is well-positioned to further expand its water business. We expect to see the majority of future acquisitions coming from Pennsylvania, which represents Essential's largest water and gas operating segments. We believe Essential's expansion into Western PA due to the Peoples acquisition will further secure the company's presence in the state and help drive acquisition growth for Aqua PA. The acquisition of DELCORA, whose service territories overlap with those incorporated in Aqua PA's footprint, will further increase Essential's presence in PA.

Company Overview

Essential Utilities Inc. (f.k.a. Aqua America, Inc.) is the second largest water and wastewater utility in the U.S., measured by market capitalization. Before its entry into the natural gas industry, Essential generated virtually all of its revenues through its regulated water utility segment (99.6% of sales), serving an estimated three million customers located primarily in states along the rust belt and Texas. Essential's customer base is primarily residential (58%), followed by commercial (16%), wastewater (12%) and other (14%) customers. Essential's growth has been marked by several key transactions, including the acquisition of Peoples Natural Gas Company, LLC ("PNG") in 2020, regulated water operations in Ohio from American Water Works in 2012, regulated water operations from AquaSource in 2003 and the merger with Consumers Water Company in 1999. On February 3, 2020, the company changed its corporate name to Essential Utilities Inc. and extends services to 747,000 gas customers and expands its footprint to include Kentucky and West Virginia. As a complement to their primary regulated business, Essential also operates certain non-utility activities through Aqua Resources and Aqua Infrastructure.

Exhibit 12: Company footprint, including Peoples Natural Gas transaction



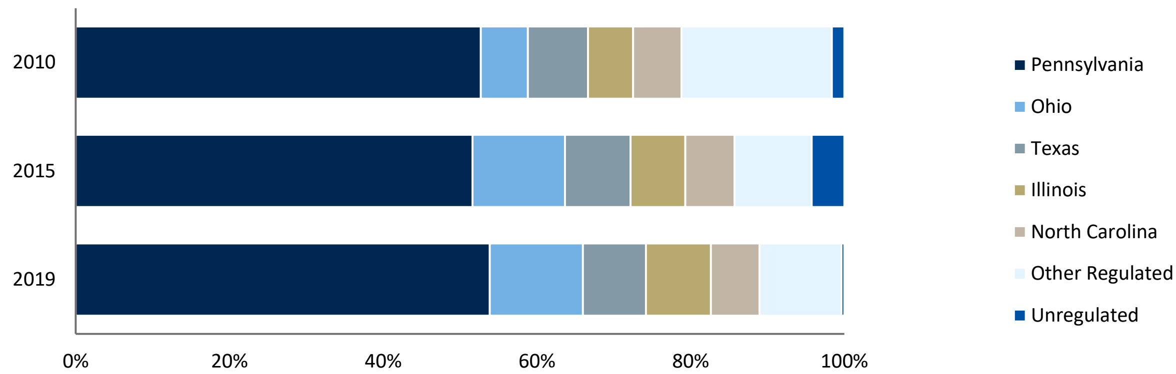
Source: Company reports

Regulated water business

Essential generates virtually all of its revenues through its regulated water business, which serves water and wastewater customers in Pennsylvania, Ohio, Texas, Illinois, North Carolina, New Jersey, Indiana and Virginia. Historically, Pennsylvania is the main operating jurisdiction, accounting for 54% of operating revenues in 2019. Ohio, Texas, and Illinois contribute to the majority of the remaining share of revenues. Over the past decade, the percentage share across these states have remained largely in line year-over-year. Customer growth for the business has been robust, recording 1.8% CAGR in the trailing five years. The majority of customers for water services are residential (58% in 2019), followed by commercial (16%) and wastewater clients (12%).

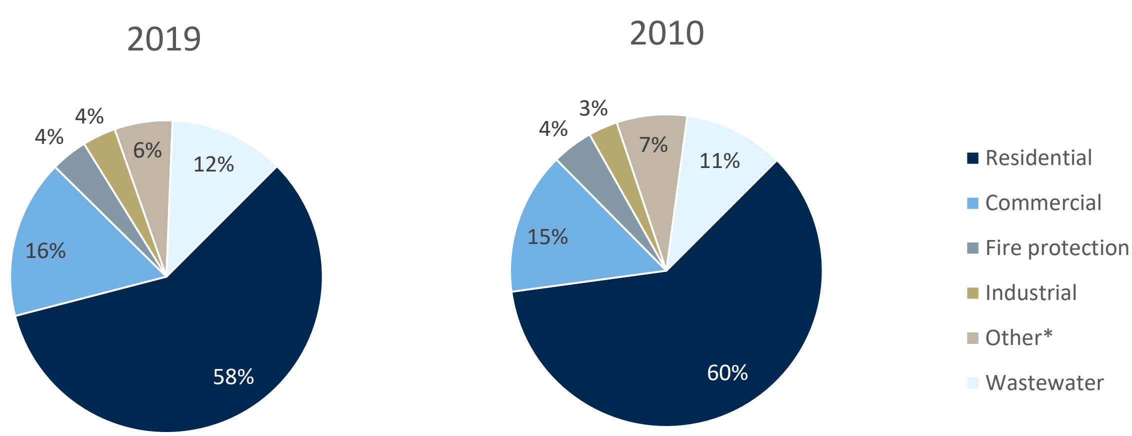
Shelby Tucker, CFA (212) 428-6462; shelby.tucker@rbccm.com

Exhibit 13: 2019 regulated water segment revenues by state



Source: Company Presentation

Exhibit 14: Regulated water segment revenues by customer class

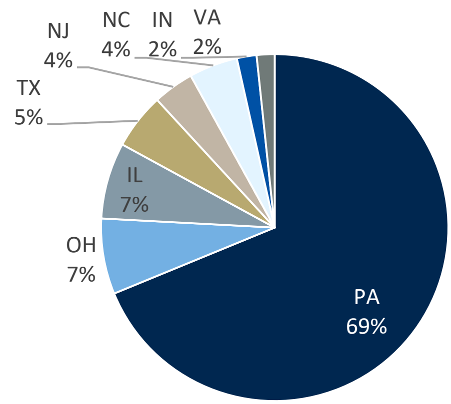


Source: Company Presentation

Water and wastewater service customers are subject to regulation by their respective state utility commissions, which determine billing rates and terms of service, among other regulatory matters. The regulated water business is dependent on water consumption which, in turn, is dependent on weather and temperature conditions much like electric and gas utilities. Generally, dry weather and high temperatures increase water consumption while above-average rainfall and low temperatures decrease water consumption. Given a regulated industry, local authorities may impose consumptions limits which could impact Essential's performance. Operating revenues for the regulated water business and operating revenues as a percentage of total were $805 million/$835 million/$886 million and 99.6%/99.6%/99.4% for 2017/2018/2019.

Utility growth is often referenced by growth in rate base. Between 2020 and 2022, rate base for water and gas are slated to ramp up at 6-7% CAGR to $6.5 billion and 8-10% CAGR to $3.0 billion, respectively. The following chart illustrates the relative sizes of water rate base as of 2018 by state.

Exhibit 15: Essential regulated water utility rate base as of 2018



Source: Company Presentation

Market-based activities

Essential conducts competitive, non-utility businesses through Aqua Resources and Aqua Infrastructure: Aqua Resources manages a water system operating and maintenance contract and offers other water solutions to customers; Aqua Infrastructure provides non-utility raw water supply services for firms in the natural gas drilling industry. Together, these businesses make up less than 0.5% of operating revenues hence immaterial to Essential's overall performance, in our view. The company's direction is consistent with a pure-play regulated utility and we believe the strategy will continue in the foreseeable future.

Peoples Natural Gas

Peoples Natural Gas ("PNG") is the largest natural gas distribution company in Pennsylvania with $2.3 billion rate base as of 2019 year-end. The company serves 747,000 customers across the Pennsylvania (93% of customers), West Virginia and Kentucky. The company's infrastructure is deeply rooted in these states, with 15,000 miles of distribution pipeline, 2,400 miles of gathering pipeline and 310 miles of intrastate transmission pipeline as of 2019. PNG is fully regulated, with 98% of earnings generated through its gas distribution business.

In October 2018, Aqua America announced the intent to acquire PNG for $4.275 billion in an all-cash transaction. The transaction closed on March 16, 2020. Much like other regulated utilities, PNG is regulated by various state commissions which determine customer tariff rates, terms of services and mergers and acquisition-related matters. On a regular basis, PNG files rate increase requests, either via riders or rate cases, to recover and earn a fair return on infrastructure spending. As with the regulated water business, the regulated gas distribution business is dependent on weather conditions and is seasonal by nature. Generally, colder weather increases gas consumption and warmer, milder weather decreases consumption. Certain states provide mechanisms that decouple gas sales from weather effects and helps smooth out earnings of gas utilities. While Pennsylvania and Kentucky offer decoupling, West Virginia does not. Given the high concentration of customers in Pennsylvania, we view the utility to be well-insulated from mild weather.

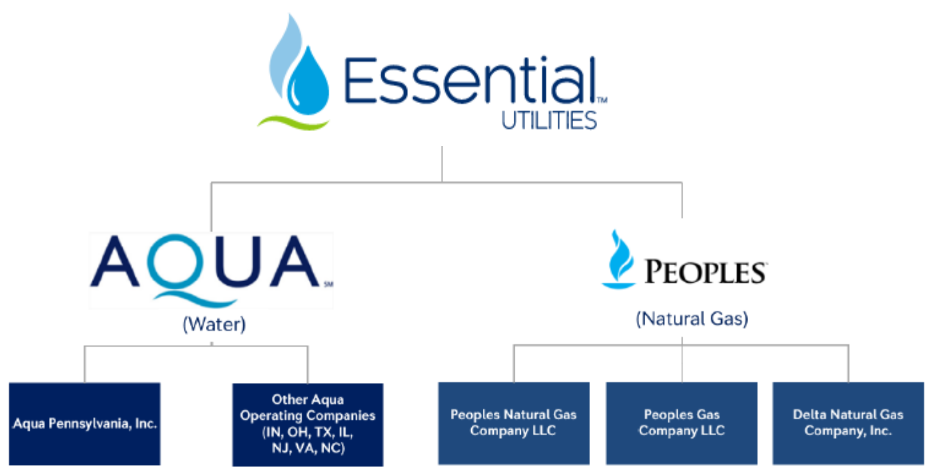
Management has indicated that it expects the business mix to stand at 70% water and 30% gas. It has also been made clear that the company wants to maintain its water-heavy earnings contribution, and will be very selective about any potential gas acquisitions moving forward.

We believe the mix of the two segments is crucial from a valuation standpoint, as this balance will play a significant role in how the stock trades compared to its utility peers.

Corporate structure – Essential Utilities

Despite consolidation in the past decades, Essential features a rather simple corporate structure. Aqua Pennsylvania, which provides regulated water and wastewater services in the state, is the largest entity within the structure and contributes to 54% of consolidated operating revenues. The figure below is a representation of the corporate structure after the PNG acquisition.

Exhibit 16: Essential Utilities corporate structure



Source: Company 10K

Management Team

Extensive industry experience. WTRG's management team has deep experience in the water utility industry, with most key executive officers serving in strategic roles at the company for extensive periods of time. We find the experience in mergers and acquisitions particularly valuable for the company, as it industry positions itself for further consolidation. The officers of Essential Utilities include:

Christopher H. Franklin – Chairman; President and Chief Executive Officer

Mr. Franklin has served as chief executive officer of Essential Utilities since July 2015 and as chairman since December 2017. Mr. Franklin was previously president and chief operating officer, regulated operations. A 20-plus-year veteran of the company, Mr. Franklin has held executive roles in public affairs, customer operations and as regional president of the company's southern and mid-western operations, where he managed eight states. While holding that post, Mr. Franklin significantly increased the performance and earnings power of these diverse state operations, while simultaneously serving as senior vice president of the company's corporate and public affairs, where he was also responsible for the company's federal, state and municipal legislative affairs, investor relations, and communications

Daniel J. Schuller – Executive Vice President and Chief Financial Officer

Mr. Schuller is executive vice president and chief financial officer for Essential. Before becoming Deputy CFO, Mr. Schuller served as Executive Vice President, Strategy and Corporate Development for Aqua America and was responsible for Aqua's strategic growth initiatives.

Mr. Schuller came to Aqua America from J.P. Morgan Asset Management – Infrastructure Investments Group where he had been an investment principal since 2007, providing strategic leadership as a director of portfolio companies including SouthWest Water Company—of which he was responsible for the 100 percent stake held by J.P. Morgan-advised investors—and Summit Utilities. Specifically for SouthWest Water, Mr. Schuller guided the company's turnaround and led its growth strategy, assessing both organic growth and acquisition opportunities. Prior to joining J.P. Morgan, Schuller was a manager at Mars & Co., an international strategy/general management consulting firm, where he led consulting engagements related to growth and profitability for Fortune 500 companies and conducted due diligence for private equity firms.

Richard S. Fox – Executive Vice President and Chief Operating Officer

Mr. Fox was named chief operating officer of Essential Utilities in July 2015. Prior to being appointed COO, he had been regional president for Aqua America since January 2012, heading all of Aqua America's utility operations in Texas, Illinois, North Carolina, Indiana and Virginia. Prior to assuming the role of regional president, he was vice president, customer operations, where he was responsible for all customer service operations for Aqua America's regulated operating subsidiaries, including the company's national customer call centers, national meter operations, and company-wide billing and collections.

Christopher P. Luning – Executive Vice President, General Counsel, and Secretary

Mr. Luning assumed the role of executive vice president, general counsel, and secretary for Essential Utilities in 2012. Mr. Luning is the company’s chief legal counsel and oversees and provides strategic direction for the company’s legal, human resources, internal audit, and safety departments. He provides direction on all parent company and its subsidiary matters, including corporate governance and board matters. Previously, he held the position of vice president, corporate development and was responsible for leading the Aqua America’s corporate development activities, contributing to the company tripling its customer base in the previous 10-year period.

Matthew R. Rhodes – Executive Vice President, Strategy and Corporate Development

Mr. Rhodes was named executive vice president, strategy and corporate development for Essential in June 2018. Prior to this role, Mr. Rhodes served 11 years as a managing director in the investment banking division at Goldman Sachs in the global natural resources group focused on mergers and acquisitions for electric and gas utility clients. Prior to that role, Mr. Rhodes worked at Bank of America and Duke Capital Partners. Mr. Rhodes is the executive sponsor the Essential Utilities’ Women Resource Group.

Robert A. Rubin – Senior Vice President, Controller and Chief Accounting Officer

Mr. Rubin was appointed senior vice president, controller and chief accounting officer (CAO) of Essential in January 2012 after having served as chief accounting officer since March 2004 and as controller for the previous five years. As CAO, Mr. Rubin is responsible for Essential’s external and internal financial reporting, including that required by the Securities Exchange Commission and Sarbanes Oxley regulations. He is also responsible for taxes, coordinating external audits, corporate accounting and maintaining compliance with accounting standards and principles throughout the company.

Water Utilities in a Splash

Water is the most essential of utility services. The defensiveness of a utility sub-sector is partially defined by its ability to maintain a rate-regulated business model that creates predictable earnings and cash flows, thus allowing for a steady and foreseeable dividend. Fifty years ago, the telecommunication industry was a steady utility until competition was introduced and cellular technology disrupted it. Even twenty years ago, the generation portion of the electric industry was partially deregulated. It is conceivable that in a few decades electricity could be produced locally, thus not requiring a network of wires. Water, on the other hand, cannot be locally produced everywhere. Its pipelines form the least by-passable network among utilities. While most utility services are viewed as essential by the authorities, we believe that a premium consideration is placed on water utilities.

The U.S. water and wastewater industries are ripe for outsized investment opportunities driven by an aging infrastructure. The EPA estimates water utilities will need to invest ~$384 billion in pipes, treatment plants, and storage tanks over the next twenty years due to decades of under-investment. A competing study produced by the America Water Works Association (AWWA) estimates water infrastructure needs will total more than $1 trillion over the same timeframe, assuming pipes are replaced at the end of their service lives. As it stands today, U.S. water systems were slapped with a D+ grade from the American Society of Civil Engineers.

Municipal acquisitions drive accretion opportunities. The EPA estimates 84% of the community water market is serviced by municipalities and 98% of the wastewater systems are government-owned. Contrast that with the electric utilities sector, where investor-owned utilities (IOUs) served 72% of all electricity customers in 2017, according to Energy Information Administration (EIA), a division of the U.S. DOE. Acquisitions of municipalities have been a driver of growth for the water IOUs, having helped the nine largest companies collectively increase earnings at a 7%+ CAGR over the past ten years. Increasingly, states are creating incentives to facilitate such acquisitions, through Fair Market Value (FMV) legislation, which we will cover later. In our view, acquisitions resulting from fair market legislation will only become more prevalent and allow municipalities to focus on other community priorities.

Water lowest risk among utilities; argues for higher valuation. While water headlines can be scary (witness the Flint, Michigan disaster), most of the headlines come from poorly managed municipalities. Water investor-owned utilities (IOUs) do not suffer interruption of service like electric blackouts, the rare gas pipeline explosion, or the more numerous gas leaks. Regulatory outcomes are generally less contentious, with a greater usage of surcharges to grow revenues. The rating agencies recognize the lower risk as their thresholds for credit ratings are lower than those applied to other utilities. All else being equal, the FFO/debt for water utilities can drop to 10% or less and still retain an investment grade rating, a feat less likely to happen for electric utilities. A lower risk typically will lead to a lower discount rate and therefore a higher multiple.

ESG meaningful underlying driver for premium valuation. We believe that ESG (Environment, Social, and Governance) investing will continue to gain traction among fund managers, thus preserving a premium valuation for water utilities. On the environment side of the ledger, water utilities have the lowest carbon footprint of all utilities. Social issues revolve around the product that water utilities provide at a reasonable price. Governance issues are more akin to other industries. For example, while some companies separate the CEO and Chairman role, others do not. While more traditional ESG investors might be precluded from investing in gas/electric utilities due to nuclear assets, gas pipelines, or other aspects of the business model, we do not see a similar restriction on water utilities. Perhaps more importantly, we believe the increasing importance of ESG and the lack of publicly traded pure-play water stocks should only serve to further increase the premium valuations for companies in the industry.

Water Utilities: Industry Overview

Crippling and Aging Water Infrastructure

The average U.S. consumer has grown accustomed to the luxury of receiving clean drinking water and the management of wastewater, with little regard for the complicated and expansive systems necessary to deliver these services. For context, the United States has 1.2 million miles of drinking water supply mains and about an equal amount of sewer pipes. According to the Environmental Protection Agency (EPA) these systems are in dire need of investment, but the general public often has stark views over rising water prices, despite paying less than $0.01 per gallon. Further, water is generally the lowest percentage utility cost per household, despite being labeled as the most important service that customers receive (notably ahead of electricity and heat), according to a study conducted by Xylem Inc. (covered by Deane Dray). The discrepancy between necessary infrastructure investments and customer pushback over the rising cost of water will likely result in a dramatic shift in the way that water is priced in the future. In order for this to happen, water pricing must be restructured to cover the full costs of treatment and delivery to consumers, including expenses related to building, operating and maintaining and replacing water systems.

EPA regulates the industry at the federal level; PUCs at the state level. The EPA is tasked with setting the water quality standards while the state economic regulatory agencies, generally referred to as Public Utility Commissions (PUCs) govern the price impact of water services for investor-owned utilities. Investor-owned utilities are granted authority by each state's PUC to operate in a service area while receiving some protection from competition in exchange for quality and reliable service. The utility is entitled to a reasonable rate of return (allowed return) on prudently invested capital and can recover operating expenses. This is accomplished through rate cases.

Investments are passed onto rates via rate cases. In most states, municipal-owned water utilities generally set their own rates and do not have to go through a state PUC approval process. Political leaders are often reluctant to increase rates as that may cause unpopular opposition from voters. Thus, needed but costly infrastructure repairs may be postponed or avoided in order to keep rates low. Meanwhile, state PUC regulation of investor-owned utilities helps promote necessary infrastructure investment, rehabilitation and/or replacement, and maintenance. It does so not only by enforcing the utility's obligation to provide safe and reliable service, but also by setting rates that cover the costs of providing that service, including a fair return on invested capital.

Water is generally a good value proposition for customers

Most customers don't understand the water framework, but view water as essential. It is a fair characterization to admit that most U.S. customers overlook the value of the water that comes out of their faucets. Ratepayers of municipal systems or investor-owned utilities generally don't think about the pathway of how their water arrives in their homes or how it is treated and to what extent before being delivered. Ratepayers living in rentals may be so disassociated with water bills, they may often not be aware of the cost or dynamics of clean water, but even when paid directly ratepayers scuffle over paying on average less than a token penny per gallon of water vs a typical water bottle costing $1.50.

The average household pays roughly $540 a year for water and wastewater services compared to about $730 for soft drinks alone. In addition, water and wastewater services are typically the lowest percentage utility cost per household, representing about 12% of bills, compared to gas at 18%, telephone at 33%, and electricity at 37%. This historical underpricing of water is largely driven by lingering public perceptions that water is a fundamental human need supplied by the earth itself, i.e. free. These consumer perceptions have prevented municipal utilities from attracting the necessary capital required to upgrade and maintain networks. Unfortunately, under-investment and inadequate water systems and/or lack of governance have caused instances like Flint, Michigan to occur, rendering national attention given the detrimental health and wellness effects of contaminated water. The water crisis in Flint displayed the disastrous consequences of lead contamination, but importantly also outlined the many other competing agendas that water utilities wrestle with including: (1) managing other drinking containments; (2) supervising wastewater treatment; and (3) handling storm water overflows. Notably, the EPA estimates 1.8 million to 3.5 million people per annum become ill from recreational contact to contaminated water. Further, the EPA estimates that about 850-900 billion gallons of untreated sewage is discharged into waterways every year due to aging pipes and inadequate resources.

Resulting from decades of underinvestment, water's aging infrastructure is in dire need of investment compounded by being the most capital intensive utility subsector. These challenges present ample investment opportunities for investor-owned utilities. The EPA estimates that $775 billion is needed to be invested in water and wastewater through 2040 due to decades of under-investment. A competing study produced by the American Water Works Association (AWWA) estimates water infrastructure needs will total more than $1 trillion over a similar timeframe, assuming pipes are replaced at the end of their service lives. As it stands today, U.S. water systems were slapped with a D+ grade and drinking water systems received a D rating from the American Society of Civil Engineers. Encouragingly, IOUs are increasing liaising with municipalities in mutual efforts to tackle the crippling and aging water infrastructure deficiencies. One of the tools is Fair Market Value legislation that we will be addressing in the next section.

Only a fraction of the contaminants are regulated by the EPA

The EPA only regulates a fraction of the emerging water contaminants presenting a massive gap between the number of chemicals and the amount that are currently regulated. On a global scale, there are roughly 144 million chemicals registered under the Chemicals Abstracts Service. New chemicals are formed rapidly, roughly every 2.5 seconds, caused by a breakdown of existing chemicals. Further, there are about 1,400 microbial pathogens that are managed by water providers and only about 6% are regulated by the EPA. This doesn't mean that consumers aren't focused on the quality of water. For example, perfluorinated compounds (PFCs) were found in 162 water systems across the U.S. impacting 15 million people in 2017. PFCs are known to bioaccumulate and persist in the environment, and animal studies indicate that they are toxic, affecting reproduction and development, despite showing limited health effects in people. To augment to reality of not covering all bases, water utilities are increasingly implementing artificial intelligence (AI) and machine learning technologies to detect a broader range of contaminants.

Highly fragmented industry ripe for consolidation

The U.S. water and wastewater industry is heavily commoditized. The fragmented nature of the water industry is highlighted by roughly 50,000 water systems in the U.S. and about 15,000 community wastewater systems compared to 1,400 gas systems and 3,800 electric systems. Further, roughly 84% and 98% of the U.S. population is served by municipal water systems and wastewater systems, respectively. Additionally, half of the water and wastewater systems serve a population of less than 500, which generally don't provide enough scale that could warrant IOU interest.

Exhibit A: U.S. water among the most fragmented utility sectors

Natural Gas Utilities | **Electric Utilities** | **Water Utilities**

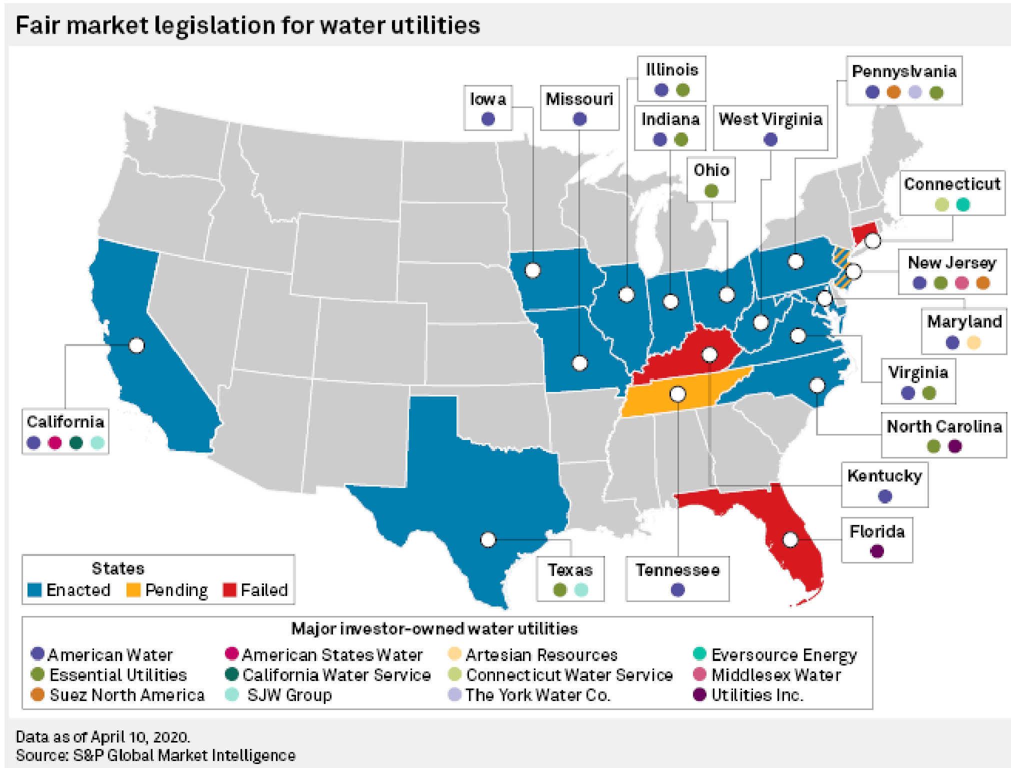
Source: Enviornmental Protection Agency and Energy Information Administration

Fair Market Value Legislation is leading to more deal-making

Fair market value assessment of water and wastewater systems is increasingly becoming a preferred alternative to the traditional depreciated original cost method, providing mutually beneficial outcomes to both the buyer and seller of municipal systems. Sellers are able to capture the true value of their assets while buyers are allowed to add the total purchase price to rate base, without padding goodwill, dubbing the premium an “acquisition adjustment”. California became the first state to adopt fair market value legislation in 1997 following the passage of SB 1268. Since California’s approval, eleven other states have adopted comparable approaches including Indiana, Missouri, Illinois, Iowa, Ohio, Pennsylvania, New Jersey, Maryland, and North Carolina, Texas, and Virginia. These states have subsequently turned into prime battlegrounds for IOUs fetching acquisition targets, further labeling the water industry as “ripe for consolidation”. We believe that this legislation has already proven to and will continue to encourage consolidation in the water and wastewater industry. In our view, further acquisitions of municipal networks will provide operators with an option to exit the management of deteriorating water and wastewater assets, offer the ability to focus on other community priorities, and forfeit the need to comply with ever increasing environmental regulations despite having limited technical expertise. Of the 20,000 municipal water systems that are possible acquisition targets, we believe only a fraction of these are scalable enough to warrant acquisition consideration from IOUs. Companies are generally limited to their core operating states, and the acquired customer count generally needs to pass certain thresholds to be considered a viable takeout candidate.

The idea behind FMV is to create a win-win for IOUs and municipalities. In the utility world, regulators generally do not allow the acquiring company to earn on the full amount that it paid to acquire another company, if a premium is involved. Goodwill in essence becomes a stranded asset. In other industries, to the extent that you can create cost savings through synergies, paying the premium may be justified. However, utility rates are set by regulators that do not allow the company to keep the savings once a rate case is filed. These issues tend to cap the amount that companies are willing to pay for utility assets. The legislation allows IOUs to add approved goodwill to the rate base when buying a municipality or cooperative in states that feature FMV. It allows the acquiring companies to provide a better incentive for the municipality to sell its under-invested assets, while allowing the company a better opportunity to earn a fair return on the acquisition capital.

Exhibit B: Fair market value state legislation and investor-owned water utility footprints

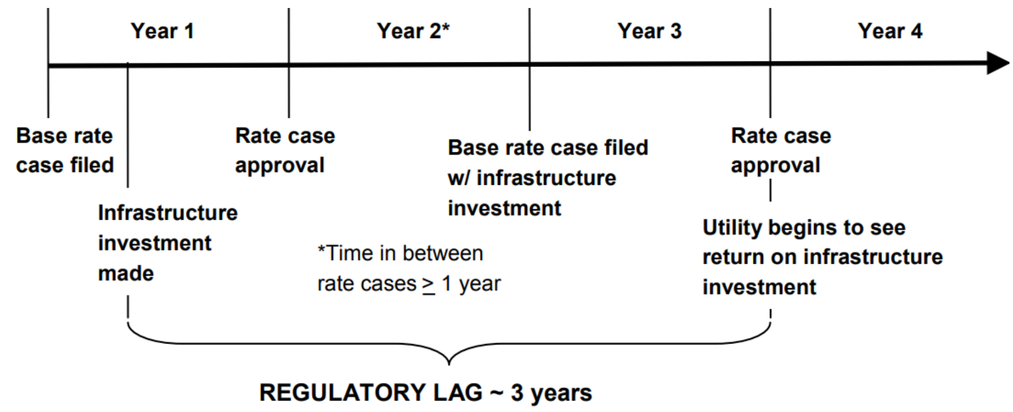


Source: Company reports, S&P Global Market Intelligence

Distribution system improvement charge

Water utilities are roughly 2x more capital intensive than their electric peers and 3x than their gas peers. As a result, repairing and replacing water and wastewater infrastructure has proven to be economically and politically challenging, primarily reflecting the impact on customer rates. To reflect this, public utility commissions (PUCs) have established infrastructure replacement surcharge programs to encourage water and wastewater infrastructure investments. Surcharge programs allow utilities to recover costs in a timelier fashion, effectively allowing them to extend the timeline between filing general rate cases, generally referred to as a stay-out. Surcharges also drive moderate base rate increases for customers, resulting in reduced customer rate shocks. Further, surcharge mechanisms help mitigate regulatory lag. Typically when a regulated water utility invests in a project, it seeks a return by filing for base rate increases through a rate case. Often, this process can be lengthy resulting in the aforementioned regulatory lag, a term coined from the time an investment is made until a utility is able to earn a return on that investment. This lag can obstruct a utilities ability to attract capital, weigh on its credit metrics, and may potentially limit necessary investments in systems.

Exhibit C: Impacting of regulatory lag



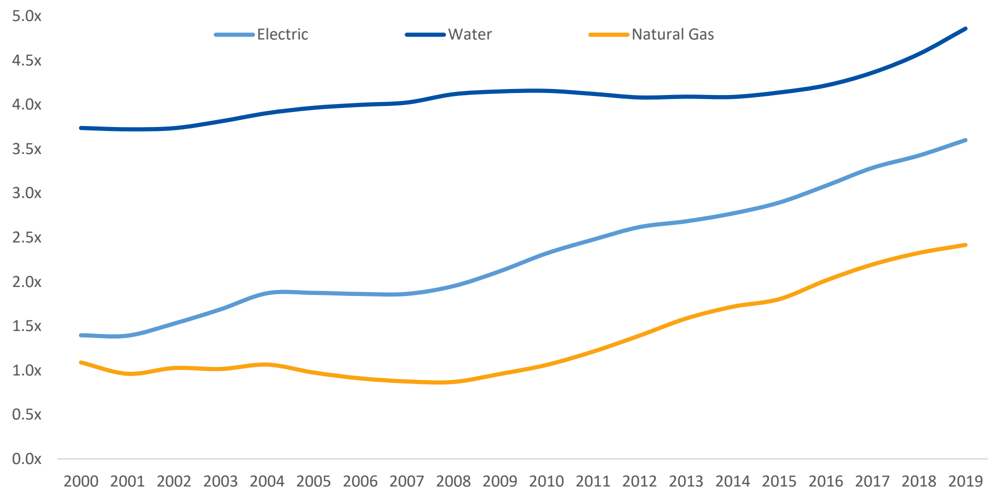
Source: American Water Works White Papers

Regulatory lag tends to have an especially adverse impact for water utilities, and consequently lead to sub-par returns during periods of heavy capital investment, due to the highly capital intensive nature of the businesses. The figure below demonstrates this dynamic. For illustrative purposes, the example showcases a historical test year (investments made during the rate case filing year would not be included in that rate case due to the investments falling outside of the test year). Assuming a general one-year timeline to conduct rate case proceedings, a utility would essentially be disallowed to earn a return on its first year's investments until year three. Surcharge rates are adjusted periodically based on infrastructure projects currently in progress or expected to be complete, but are typically reset to zero when a new base rate case begins, effectively rolling the surcharge based investments into the rate base. Further, surcharge rates are typically capped at 5.0% and 7.5% of a utility's annual revenue.

Capital intensity drives sustainable rate base growth

We believe the water utility sector has several unique and characteristics compared to the electric and gas sectors, particularly as it relates to return-generating projects and the associated revenue requirements to maintain infrastructure investments. Capital costs are mainly concentrated in pumping equipment, treatment facilities, and distribution systems. As noted previously, water utilities are roughly 2.0x more capital intensive than their electric peers and 3.0x more than their gas peers. Further, the net PP&E to revenues ratio for investor-owned water utilities is about 5.0x, compared to electric utilities of 3.4x and natural gas utilities of 2.3x. In our view, this ratio showcases the importance of infrastructure spending as a key characteristic of the industry's cost structure, and therefore making it difficult to pare back and reduce capital costs. Even as companies continue to drive their efficiency ratios lower, notably American Water Works and Aqua America, operating costs can only offset capital costs to a limited extent. In the figure below, we highlight the delta between the net utility PP&E to revenues of the three utility sub-sectors.

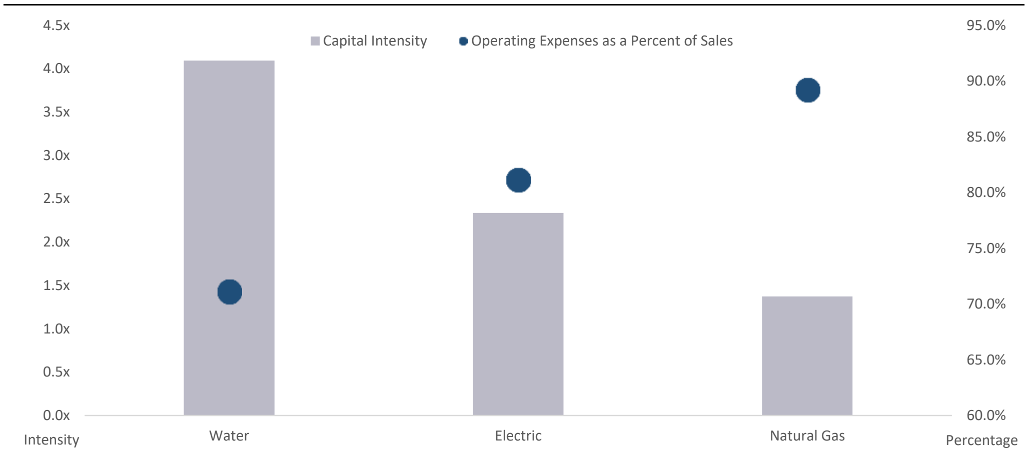
Exhibit D: Net utility PP&E to revenues



Note: Water, Natural Gas, and Electric Peers Include:
Water Peers: ARTNA, AWK, AWR, CWT, MSEX, SJW, WTRG, YORW
Natural Gas Peers: ATO, CPK, NJR, NWN, OGS, SJI, SR, SWX
Electric Peers: AEE, AEP, ED, ES, EVRG, PNM, PNW, PPL, SO, WEC, XEL
Source: Company reports

Despite the aforementioned capital intensive nature of the water utility sector, on a relative basis, companies generally spend the least amount of O&M dollars to maintain their assets vs electric and gas peers. To put this into perspective, over the past twenty years, water utility O&M expenses as a percent of PP&E averaged 20% compared to gas utilities at 40% and electric utilities at 60%. This leads us to believe that more water utility revenues are geared towards return-generating investments vs electric and gas peers which allocate a greater portion of expenses towards pass through costs that generally do not generate a return. This suggests to us that any incremental O&M savings could lead to further investment in capex dollars which eventually translate to higher rate base and earnings growth.

Exhibit E: Capital intensity and O&M expenses by utility sub-sector



Note: Water, Natural Gas, and Electric Peers Include:
Water Peers: ARTNA, AWK, AWR, CWT, MSEX, SJW, WTRG, YORW
Natural Gas Peers: ATO, CPK, NJR, NWN, OGS, SJI, SR, SWX
Electric Peers: AEE, AEP, ED, ES, EVRG, PNM, PNW, PPL, SO, WEC, XEL
Source: FactSet, Company reports, RBC Capital Markets

Environmental, Social Responsibility, and Governance

Environmental, social responsibility, and governance (ESG) principles are increasingly becoming mainstream components of investment decisions. The Global Sustainable Investment Alliance Review estimates that $17.5 trillion of sustainable-investing AUM globally proactively consider ESG components alongside financial analysis when contemplating investment decisions. To this extent, water utilities are stewards of a critical natural resource which has naturally drawn a connection to ESG principles. We believe American Water has established itself as the ESG template within the utility industry, ranking 23rd on Barron's most sustainable companies list, and the highest ranked utility.

The water utility industry generally scores higher in ESG than its electric/gas counterparts for a variety of reasons. The inherent asset profile for water utilities is considered superior to the asset profile of electric and gas utilities, principally due to the lack of coal, nuclear, natural gas, and pipelines. Additionally, water assets generally are considered higher-quality and safer.

The Sustainable Accounting Standards Board (SASB) provides a framework for analyzing ESG factors among electric, gas, and water utilities. In SASB's Materiality Map, which highlights various dimensions and general issues that would be material in evaluating a company's ESG profile, there are only two general issues that are considered material across electric, gas, and water utilities: Access & Affordability and Business Model Resilience. This highlights the inherent differences among the business profiles, in our view.

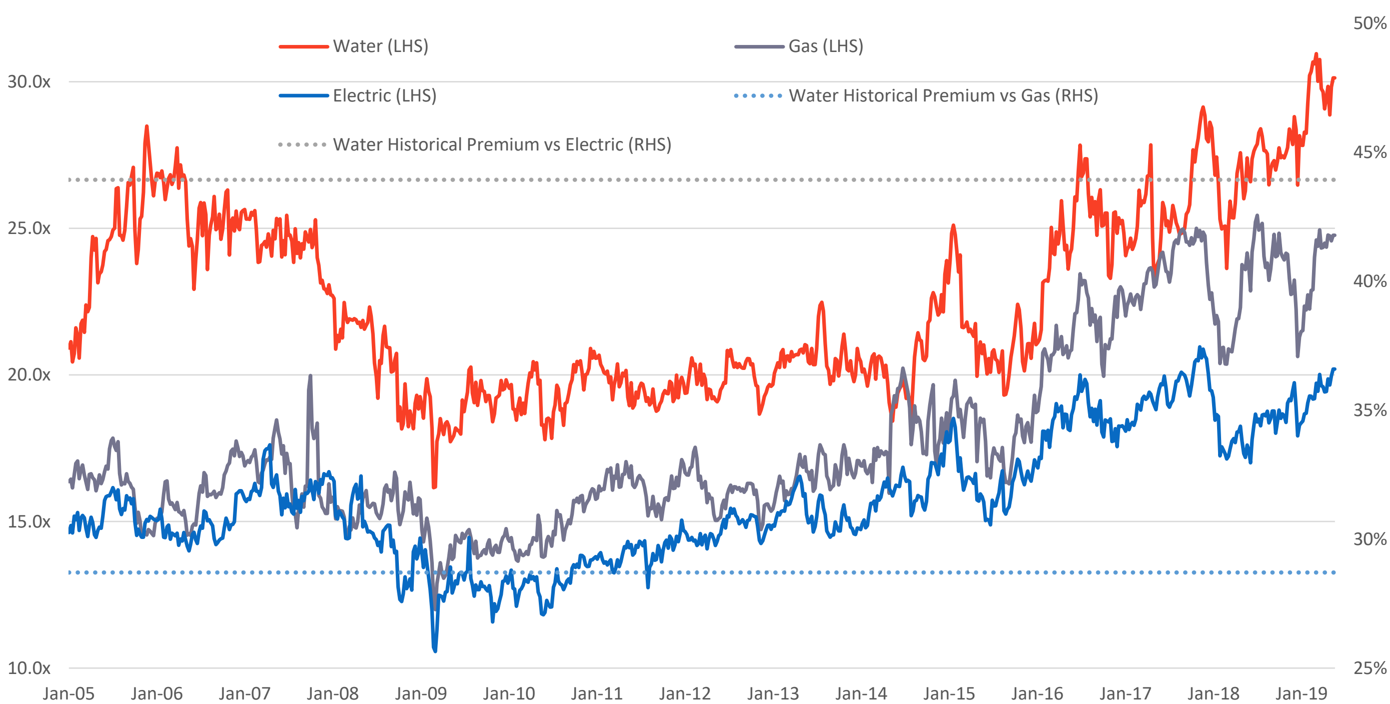
While we recognize that water utilities' environmental aspects are generally accepted as superior to electric/gas utilities, this is not the whole ESG story. When analyzing the ESG profiles of water utilities, it is important to compare water utilities among water utilities, meaning the E becomes less important on a relative basis. To us, key factors to consider include disclosure/quality of data (reporting under SASB standards, issuing sustainability reports, etc.), customer rates at or below national average, diversity of employees and Boards of Directors, and separation of CEO/Chairman.

Valuation Considerations

You Get What You Pay For

Utilities are commonly known for driving predictable earnings growth, and therefore it is common practice to use the price-to-earnings (P/E) ratio to calculate the value of utility equities. Valuations are also driven by utilities' established incumbent status, high barriers to entry, low commodity price exposure, increasing regulatory support, and steady (although generally declining) regulated returns. To this extent, regulated water, electric, and natural gas utilities have historically established what we view as 'entitled' multiples that vary quite a bit from one another. However, these utilities generally do not trade away from their respective peers (water, electric, gas) often, and instead stay within a fairly narrow band of valuation. Over the past fifteen years, water utilities averaged a ~23.0x next-twelve-month P/E ratio, reflecting a +30% premium to its natural gas peers, and a +45% premium vs its electric peers over the course.

Exhibit F: Water, natural gas, and electric utility peers forward P/E ratios



Note: Water, Natural Gas, and Electric Peers Include:
Water Peers: ARTNA, AWK, AWR, CTWS, CWT, MSEX, SJW, WTRG, YORW
Natural Gas Peers: ATO, CPK, NJR, NWN, OGS, SJI, SR, SWX
Electric Peers: AEE, AEP, ED, ES, EVRG, PNM, PNW, PPL, SO, WEC, XEL
Source: FactSet, RBC Capital Markets estimates

We believe structural differences between water utilities and their peers, which include several other factors, have contributed to the lofty historical premium. We highlight some of our observations below:

Naturally lower risk assets. Despite being the most capital intensive utility sector, water utilities are naturally lower risk assets and therefore command higher valuation multiples relative to their electric and natural gas peers. Recent PG&E investor capitulation following the devastating November 2018 Camp Fire, the natural gas explosions plaguing NiSource, or implications of fracking remind us of the elevated risks natural gas and electric utility peers absorb.

We believe prices may be moving higher. Until water is priced in a way that encourages wise use, reflects the true cost of delivering it, and allows for adequate replacement of that infrastructure, Americans will continue to take water for granted, and the infrastructure that makes it so easy for them to do so will continue to deteriorate.

Municipal acquisitions drive positive estimate revisions. Municipal acquisitions, and in particular fair market value legislation allow municipalities to be acquired for fair market prices. In turn, acquirers can add the total purchase price to the rate base, allowing water utilities to earn a return on the full rate base, without padding goodwill on the balance sheet. We estimate every $100 million deployed towards municipal acquisitions adds roughly $5 million to net income, assuming a best case scenario of regulatory lag.

Pure-play scarcity multiple applied to water peers. To a certain extent, water utility valuations are also driven by "scarcity value". This leaves funds with investment specific mandates a small selection of water utilities to invest in. There are only nine publicly traded water utilities, including Essential Utilities. Reflecting this treatment, we observed forced-selling in Essential Utilities (formerly known as Aqua America) shares in conjunction with its October 2018 Peoples Gas acquisition announcement for $4.5 billion.

Bite-sized enterprise values draw takeout considerations. The total market capitalization of publicly traded water utilities stands at roughly $44 billion vs ~$57 billion for their natural gas peers and ~$816 billion for their electric and multi-utility peers. We note that American Water Works and Essential Utilities represent about 78% of the aggregate water utility market capitalizations. In our view, this reflects the relatively bite-sized enterprise values of water utilities, despite above-average P/E ratios. To date, we've only observed Essential Utilities willing to dilute its pure-play water multiple with the announcement of its Peoples Gas acquisition, but we wouldn't rule out water acquisitions by electric and gas utilities. For now, the valuation multiple disparities present challenges to structure accretive acquisitions though we have seen more electric and gas utilities ramp up their respective ESG efforts which we believe could lead to higher valuation multiples for these entities.

Environmental, Social, and Governance (ESG) characteristics drive higher multiples. We believe utilities that have deliberately applied ESG principles fetch higher valuation multiples. The ESG model is easily implemented in the water framework given the very nature of the business models and strategic visions balance the provision of essential services with environmental stewardship, affordability, and financial integrity. To this tune, we believe ESG-focused companies generally exhibit higher quality of earnings driven by lower earnings volatility and higher return on equity. These characteristics have also drive higher P/E ratios.

Distribution Surcharge Infrastructure Changes (DSIC) arguably shift risks away from investors. Water utilities are known to stay out of rate cases and we believe this is a function of DSIC. Surcharges are reset to zero during the next rate or in the event that a company exceeds its allowed ROE.

Valuation framework

Inherent higher growth and ESG premiums lead to sustainably greater valuations. Our valuation framework for utilities is derived from the dividend discount model, where we assume a run rate risk free at 3.5% (well above the current 10-year Treasury yield of 0.65%). Exhibit G below shows the base P/E calculation that we employ for a traditional slow-growing electric utility.

Exhibit G: 3%-growing electric utility starts with a 17.8x forward P/E multiple

Cost of Equity Calculation		Absolute P/E Calculation	
Market Premium	6.3%	Dividend Payout Ratio	66.0%
Regulated Electric Beta	0.53	Dividend/Share Growth (g)	3.0%
10-Yr Treasury	3.50%	ESG premium	0.0%
Return on Equity (k)	6.8%	**RBC's Sustainable P/E**	**17.8x**

Source: Bloomberg; FactSet; RBC Capital Markets

We note that the above calculation tries to capture the long-term run rate utility, which, absent the heavy infrastructure requirements that exist in the electric business today, would likely grow only 3% a year, versus the foreseeable growth of 5%-6% a year.

There are only three variables that change for the water sector. One, we were somewhat surprised that the water utility beta is roughly in line to slightly higher than the electric beta. It may be due to the fact that the majority of water utilities are small to mid cap stocks, which can exhibit greater volatility. Two, the underpinning secular growth of the water sector is greater. We have assumed that a slow growing water company should manage to grow 4% per year. And three, we are introducing an ESG premium to our valuation with the launch of our water utility roll-out. We assume that the group starts with a 10% premium due to a combination of ESG investors and water funds that enhance the scarcity value of water stock. When we factor all that in, we arrive at a base P/E of 24.9x, as shown below. From there, we add a premium or discount based on numerous factors, including: quality of regulation, higher/lower growth rate expectation, quality of earnings/cash flow/credit, etc.

Exhibit H: 4%-growing water utility starts with a 24.9x forward P/E multiple

Cost of Equity Calculation		Absolute P/E Calculation	
Market Premium	6.3%	Dividend Payout Ratio	64.0%
Regulated Water Beta	0.55	Dividend/Share Growth (g)	4.0%
10-Yr Treasury	3.50%	ESG/water premium	10.0%
Return on Equity (k)	6.9%	**RBC's Sustainable P/E**	**24.9x**

Source: Bloomberg; FactSet; RBC Capital Markets

Essential Utilities, Inc.	Shelby G. Tucker, CFA; RBC Capital Markets
Consolidated Income Statement	**+1 (212) 428-6462; shelby.tucker@rbccm.com**

Fiscal Year Ending December 31,
($ in millions, except per share amounts)

INCOME STATEMENT	2018	2019	2020E	2021E	2022E	2023E
Revenues						
Adjusted Regulated Water Revenues	814.5	886.4	961.6	1,047.0	1,116.8	1,188.6
Regulated Natural Gas Revenues	-	-	611.8	982.8	1,030.6	1,085.6
Purchased Water	20.2	20.0	20.0	20.0	20.0	20.0
Other	3.5	3.3	5.0	5.0	5.0	5.0
Non-Recurring Revenues	-	-	-	-	-	-
Operating Revenues	**838.1**	**889.7**	**1,598.4**	**2,054.8**	**2,172.4**	**2,299.1**
Operating Expenses						
Purchased Water	(20.2)	(20.0)	(20.0)	(20.0)	(20.0)	(20.0)
Purchased Gas	-	-	(238.6)	(373.5)	(381.3)	(401.7)
Operations and Maintenance	(272.1)	(313.1)	(486.2)	(573.9)	(601.8)	(629.2)
Other Operations and Maintenance	(16.2)	(18.1)	(15.0)	(15.0)	(15.0)	(15.0)
Operations and Maintenance	(308.5)	(333.1)	(521.2)	(608.9)	(636.8)	(664.2)
Depreciation	(146.0)	(158.2)	(240.5)	(293.2)	(316.0)	(339.1)
Amortization	(0.6)	1.7	(0.5)	(0.5)	(0.5)	(0.5)
Taxes, Other than Income Taxes	(59.8)	(60.0)	(75.9)	(88.8)	(95.4)	(102.1)
Non-Recurring Operating Expenses	-	-	-	-	-	-
Operating Expenses	**(514.9)**	**(549.5)**	**(1,076.8)**	**(1,364.9)**	**(1,430.1)**	**(1,507.5)**
Operating Income	**323.2**	**340.2**	**521.6**	**689.9**	**742.4**	**791.6**
EBITDA	**469.9**	**496.6**	**762.6**	**983.6**	**1,058.9**	**1,131.2**
Adjusted EBITDA	**409.9**	**467.1**	**764.6**	**985.6**	**1,060.9**	**1,133.2**
Interest Expense	(98.9)	(100.0)	(201.7)	(237.2)	(256.8)	(271.2)
Allowance for funds during construction	13.0	16.2	16.0	16.0	16.0	16.0
Change in fair value of interest rate swap agreements	(59.779)	(23.742)				
Gain on sale of other assets	0.7	0.9	-	-	-	-
Equity (earnings) loss in joint venture	2.1	2.2	2.0	2.0	2.0	2.0
Other	(61.8)	(48.0)	-	-	-	-
EBT	**118.5**	**187.8**	**337.9**	**470.7**	**503.6**	**538.4**
Income Taxes	13.7	13.0	(27.6)	(32.7)	(34.9)	(37.2)
Effective Tax Rate	-11.5%	-6.9%	8.2%	6.9%	6.9%	6.9%
Income from Continuing Operations	**132.2**	**200.8**	**310.3**	**438.0**	**468.7**	**501.2**
Income from Discontinued Ops.	-	-	-	-	-	-
Net Income (GAAP)	**132.2**	**200.8**	**310.3**	**438.0**	**468.7**	**501.2**
Adjustments	58.8	39.0	-	-	-	-
Adjusted Net Income	**191.0**	**239.8**	**310.3**	**438.0**	**468.7**	**501.2**
Earnings Growth						
Adjusted Earnings Per Share - Diluted	**$1.07**	**$1.47**	**$1.21**	**$1.67**	**$1.78**	**$1.89**
EPS Growth	*-20.4%*	*37.3%*	*-17.6%*	*37.7%*	*6.5%*	*6.5%*
Dividend per common share	$0.8474	$0.9066	$0.9700	$1.0378	$1.1104	$1.1882
Payout Ratio	*79.1%*	*61.7%*	*80.1%*	*62.2%*	*62.5%*	*62.8%*
Dividend Growth	*7.0%*	*7.0%*	*7.0%*	*7.0%*	*7.0%*	*7.0%*
Basic Common Shares Outstanding	177.9	215.6	255.8	262.1	263.2	264.2
Diluted Common Shares Outstanding	178.4	215.9	256.3	262.6	263.7	264.7

Source: Company Reports, RBC Capital Markets Estimates

Essential Utilities, Inc.						Shelby G. Tucker, CFA; RBC Capital Markets
Consolidated Statements of Cash Flow and Balance Sheet						**+1 (212) 428-6462; shelby.tucker@rbccm.com**
Fiscal Year Ending December 31,						
($ in millions, except per share amounts)						

CASH FLOW DATA	2018	2019	2020E	2021E	2022E	2023E
Operating Activities						
Net Income (from continuing operations)	192.0	224.5	310.3	438.0	468.7	501.2
Depreciation and Amortization	146.7	156.5	241.0	293.7	316.5	339.6
Deferred Income Taxes	(15.0)	(10.4)	12.5	25.0	25.0	25.0
Provision for Doubtful Accounts	5.3	5.3	5.0	5.0	5.0	5.0
Stock Based Compensation	7.6	7.4	7.0	7.0	7.0	7.0
Gain on Sale of Utility System, Other Assets	(0.7)	(1.3)	-	-	-	-
Loss and settlement on interest rate swap agreements	59.779	(59.8)				
Equity loss in Joint Venture	-	-	-	-	-	-
Working Capital	(17.5)	0.8	-	-	-	-
Pension and other Postretirement Benefit Contributions	(14.2)	(8.6)	-	-	-	-
Other	4.5	24.2	-	-	-	-
Cash Flow from Operations	**368.5**	**338.5**	**575.8**	**768.7**	**822.2**	**877.8**
Investing Activities						
Capital Expenditures	(495.7)	(550.3)	(810.0)	(959.5)	(969.1)	(978.8)
Acquisitions, Net	(145.7)	(59.7)	(3,515.0)	(326.5)	(100.0)	(100.0)
Additions/Release of Funds Related to Construction Activity	-	-	-	-	-	-
Net Proceeds from Sale of Utility Systems	0.7	2.9	-	-	-	-
Proceeds from Note Receivable	-	-	-	-	-	-
Other - Investing	0.9	2.5	-	-	-	-
Cash Flow from Investing	**(639.8)**	**(604.6)**	**(4,325.0)**	**(1,286.0)**	**(1,069.1)**	**(1,078.8)**
Financing Activities						
Customer Advances and Contributions in Aid of Construction	7.5	9.1	10.0	10.0	10.0	10.0
Repayment of Customers' Advances	(6.2)	(6.8)	(6.0)	(6.0)	(6.0)	(6.0)
Net Proceeds of Short Term Debt	11.8	10.3		(10.0)	40.0	-
Proceeds From Long Term Debt	1,331.9	1,409.3	1,100.0	950.0	1,100.0	650.0
Repayments of Long Term Debt	(914.1)	(1,048.5)	(7.4)	(208.9)	(655.4)	(182.4)
Proceeds From Issuance of Common Stock	5.2	1,272.1	1,050.0	50.0	50.0	50.0
Proceeds From Exercised Stock Options	1.5	1.9	-	-	-	-
Proceeds from tangible equity unit issuance	-	673.6	-	-	-	-
Stock Base Compensation Windfall Tax Benefit	-	-	-	-	-	-
Repurchase of Common Stock	(2.6)	(1.9)	-	-	-	-
Dividends Paid on Common Stock	(150.7)	(188.5)	(248.6)	(272.5)	(292.8)	(314.5)
Other	(13.4)	0.8	-	-	-	-
Cash Flow from Financing	**270.7**	**2,131.4**	**1,897.9**	**512.6**	**245.8**	**207.1**
Beginning Cash Balance	4.2	3.6	1,868.9	17.7	13.0	11.9
Change in Cash	(0.6)	1,865.3	(1,851.2)	(4.7)	(1.2)	6.1
Ending Cash Balance	**3.6**	**1,868.9**	**17.7**	**13.0**	**11.9**	**17.9**

Source: Company Reports, RBC Capital Markets Estimates

Essential Utilities, Inc.	Shelby G. Tucker, CFA; RBC Capital Markets
Consolidated Statements of Cash Flow and Balance Sheet	+1 (212) 428-6462; shelby.tucker@rbccm.com

Fiscal Year Ending December 31,
($ in millions, except per share amounts)

BALANCE SHEET DATA	2018	2019	2020E	2021E	2022E	2023E
ASSETS						
Cash & Equivalents	3.6	1,868.9	17.7	13.0	11.9	17.9
Accounts Receivable	101.2	67.1	191.8	246.6	260.7	275.9
Inventory, Materials and Supplies	15.8	40.5	32.0	41.1	43.4	46.0
Gas Stored - Current Portion		18.4				
Prepayments and Other Current Assets	26.5	17.8	17.8	17.8	17.8	17.8
Total Current Assets	**147.2**	**2,012.7**	**259.3**	**318.5**	**333.8**	**357.6**
Property, Plant and Equipment						
Property, Plant & Equipment, gross	7,648.5	8,201.9	12,644.2	13,930.2	14,999.3	16,078.1
Less: Accumulated Depreciation	(1,718.1)	(1,856.1)	(3,310.8)	(3,604.5)	(3,921.0)	(4,260.6)
Property, Plant and Equipment, net	**5,930.3**	**6,345.8**	**9,333.4**	**10,325.7**	**11,078.3**	**11,817.5**
Regulatory Assets	788.1	878.1	1,181.6	1,181.6	1,181.6	1,181.6
Deferred Charges and Other Assets, Net	39.2	42.7	56.5	14.3	21.6	29.9
Investment in Joint Venture	7.0	6.0	6.0	6.0	6.0	6.0
Funds Restricted for Construction Activity	-	-	-	-	-	-
Goodwill and Intangibles	52.7	63.8	2,369.9	2,369.9	2,369.9	2,369.9
Operating lease right of use	-	12.9	68.8	68.8	68.8	68.8
Total Long Term Assets	**6,817.3**	**7,349.2**	**13,016.2**	**13,966.3**	**14,726.1**	**15,473.6**
TOTAL ASSETS	**6,964.5**	**9,362.0**	**13,275.5**	**14,284.8**	**15,060.0**	**15,831.3**
LIABILITIES						
Current Maturities of Long-Term Debt	144.5	105.1	208.9	780.4	182.4	51.5
Loan Payable	15.4	25.7	25.7	15.7	55.7	55.7
Accounts Payable	77.3	74.9	82.4	90.7	99.7	109.7
Accrued Interest	23.3	29.8	32.8	36.1	39.7	43.7
Accrued Taxes	22.2	22.8	25.1	27.6	30.3	33.3
Regulatory liabilities - current portion	-	-	-	-	-	-
Other Current Liabilities	116.1	60.6	66.6	73.3	80.6	88.7
Total Current Liabilities	**399.0**	**318.8**	**441.5**	**1,023.7**	**488.5**	**382.6**
Long Term Liabilities						
Long Term Debt, Excluding Current Portion	2,398.5	2,943.3	5,587.5	5,757.1	6,799.7	7,398.2
Deferred Income Taxes and Investment Tax Credits	845.4	936.2	948.7	973.7	998.7	1,023.7
Customers' Advances for Construction	93.3	95.6	105.6	115.6	125.6	135.6
Regulatory Liabilities	531.0	517.6	517.6	517.6	517.6	517.6
Other	97.2	102.5	102.5	102.5	102.5	102.5
Operating lease liabilities	-	11.6	11.6	11.6	11.6	11.6
Contributions in Aid for Construction	590.7	555.5	555.5	555.5	555.5	555.5
Total Deferred Credit and Other Liabilities	**4,556.2**	**5,162.3**	**7,829.0**	**8,033.6**	**9,111.2**	**9,744.7**
Total Liabilities	**4,955.1**	**5,481.1**	**8,270.5**	**9,057.3**	**9,599.6**	**10,127.2**
Shareholders' Equity						
Common Stock	90.6	111.9	118.9	125.9	132.9	139.9
Capital in Excess of Par Value	820.4	2,636.6	3,686.6	3,736.6	3,786.6	3,836.6
Retained Earnings	1,174.2	1,210.1	1,271.8	1,437.3	1,613.1	1,799.8
Treasury Stock	(75.8)	(77.7)	(77.7)	(77.7)	(77.7)	(77.7)
Accumulated Other Comprehensive Income	-	-	5.4	5.4	5.4	5.4
Noncontrolling interests	-	-	-	-	-	-
Stockholder's Equity	**2,009.4**	**3,880.9**	**5,005.0**	**5,227.5**	**5,460.4**	**5,704.1**
TOTAL LIABILITIES AND EQUITY	**6,964.5**	**9,362.0**	**13,275.5**	**14,284.8**	**15,060.0**	**15,831.3**

Source: Company Reports, RBC Capital Markets Estimates

Required disclosures

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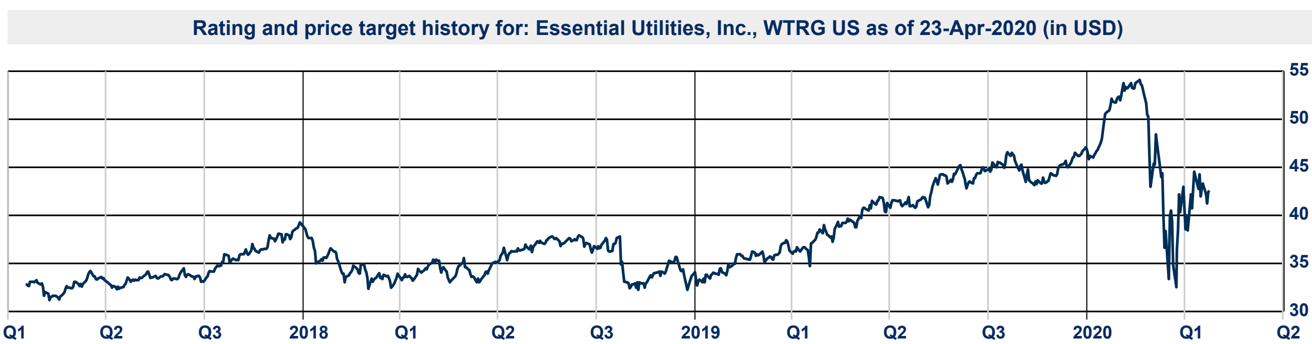
Distribution of ratings
RBC Capital Markets, Equity Research
As of 31-Mar-2020

			Investment Banking Serv./Past 12 Mos.	
Rating	**Count**	**Percent**	**Count**	**Percent**
BUY [Outperform]	755	51.64	220	29.14
HOLD [Sector Perform]	619	42.34	126	20.36
SELL [Underperform]	88	6.02	11	12.50



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Essential Utilities, Inc.

Valuation

Our $49 price target assumes WTRG trades at a 29.4x P/E multiple on our 2021 estimate of $1.67. This multiple represents a 25% premium to our base multiple of 24.9x P/E for water utilities and a 30% premium to our base multiple of 19.3x P/E for gas utilities. The implied return to our $49 price target supports our Outperform rating.

Risks to rating and price target

- Lower-than-anticipated adaptation of fair market value principles across the country could dampen expectations.
- M&A transactions could require greater equity than we forecast, or could result in a weaker balance sheet than we expect.
- Less favorable regulations or disruptions within public utility commissions could weigh on growth.
- Climate variability may cause increased volatility in weather and may impact water usage and related revenue, which may not be recoverable through rates.
- Continued lockdown from coronavirus could impact revenues, through higher bad debt expenses.
- ESG investing continues to gain traction, but WTRG does not meet certain ESG criteria due to Peoples, which makes it ineligible to benefit from these increased flows.

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